

# Arizona State Retirement System

## U.S. Equity Asset Class Review

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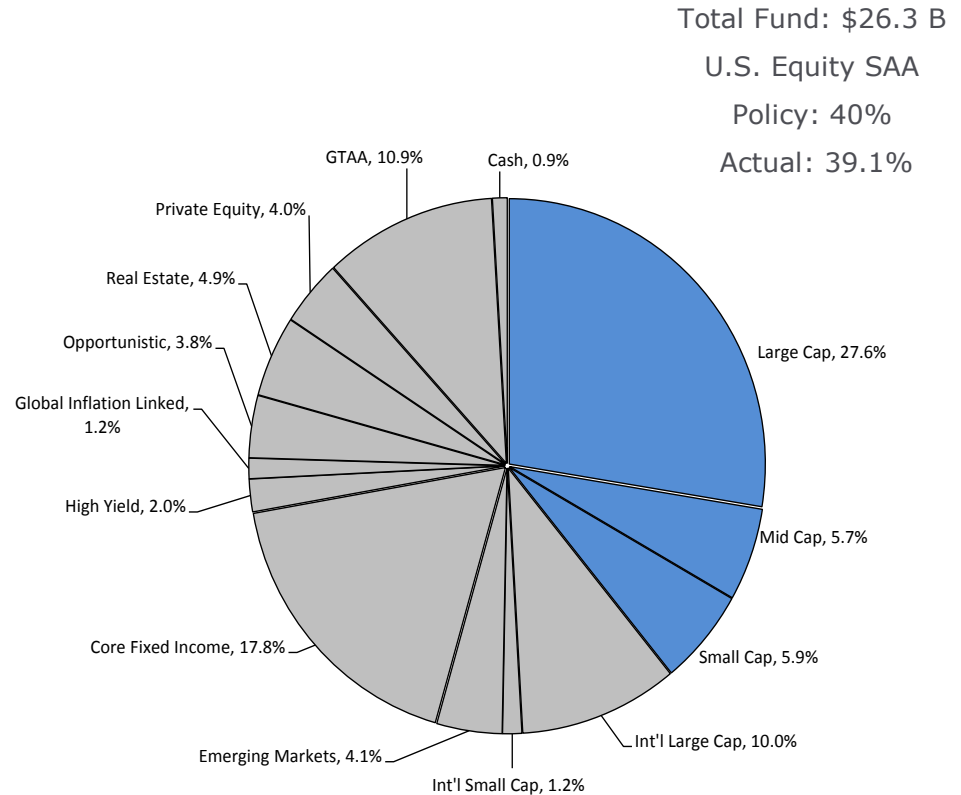
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# **U.S. Equity Asset Class Overview (Aggregate)**

**Note: All of the data in this section is as of December 31, 2011, unless otherwise noted.**

# U.S. Equity Asset Class Overview

- **Market Value: \$10.3 B**
- **Passive Allocation: 70%**
- **Active Style Composition:**
  - Core: 23%
  - Growth: 38%
  - Value: 39%
- **Portfolios:**
  - 6 Passive
  - 8 Active
    - Quantitative: 4
    - Fundamental: 4
- **Average Fees: 15 bps**



*Note: Domestic Equity, International Equity, Fixed Income, Real Estate and Commodities allocations exclude GTAA portfolios.*

# U.S. Equity Asset Class Mandates

Manager	Style	Benchmark	Inception Date	Expected Alpha – Net of Fees (bps)	Portfolio Assets (\$MM)	Strategy Assets (\$MM)
<b>Active Large Cap</b>						
Jacobs Levy	Core (120/20)	S&P 500	10/31/2006	300	\$205.2	\$1,800*
INTECH	Growth	S&P 500 Growth	12/31/2002	350	\$696.3	\$7,083
LSV	Value	S&P 500 Value	12/31/2002	200	\$603.0	\$20,955
<b>Active Mid Cap</b>						
Wellington	Core	S&P 400	6/30/2002	300	\$390.8	\$8,278
CRM	Value	S&P 400 Value	12/31/2003	300	\$135.3	\$6,038
<b>Active Small Cap</b>						
TimesSquare	Growth (SMID)	Russell 2500 Growth	3/31/2005	215	\$480.3	\$3,900
Champlain	Core	S&P 600	12/31/2007	200	\$134.0	\$2,960
DFA	Value	S&P 600 Value	8/31/1998	200	\$461.5	\$16,400

\*Jacobs Levy manages \$1.8 Billion in enhanced active 120/20 and 130/30 strategies.

# U.S. Equity Asset Class Mandates

Manager	Style	Benchmark	Inception Date	Expected Alpha (bps)	Portfolio Assets (\$MM)	Strategy Assets (\$MM)
<b>Passive Large Cap</b>						
ASRS E1	Core	S&P 500	9/30/1995	25	\$1,330.6	N/A
ASRS E2	Core	S&P 500	3/31/1997	5	\$4,048.0	N/A
BlackRock	Core	S&P 500	7/31/1989	0	\$373.9	\$198,269
<b>Passive Mid Cap</b>						
ASRS E3	Growth	S&P 400 Growth	11/30/2000	10	\$476.4	N/A
ASRS E4	Value	S&P 400 Value	6/30/2002	10	\$485.0	N/A
<b>Passive Small Cap</b>						
ASRS E6	Core	S&P 600	2/1/2007	10	\$467.8	N/A

# U.S. Equity Asset Class Manager Summary

	Growth	Core	Value	Total*
Large	6.8%	57.9%	5.9%	70.5%
Mid	4.6%	3.8%	6.0%	14.5%
Small	4.7%	5.8%	4.5%	15.0%
Total*	16.1%	67.6%	16.4%	100%

Manager Name	Assets Under Management (\$MM)	% of Domestic Equity
<b>Active Large Cap Equity</b>		
Jacobs Levy - Core	\$ 205.2	2.0%
INTECH - Growth	\$ 696.3	6.8%
LSV - Value	\$ 603.0	5.9%
<b>Passive Large Cap Equity</b>		
Internally Managed ASRS E1 - Core	\$ 1,330.6	12.9%
Internally Managed ASRS E2 - Core	\$ 4,048.0	39.3%
BlackRock Investment Trust Company - Core	\$ 373.9	3.6%
<b>Total Large Cap Equity</b>	<b>\$ 7,256.9</b>	<b>70.5%</b>
<b>Active Mid Cap Equity</b>		
Wellington - Core	\$ 390.8	3.8%
CRM - Value	\$ 135.3	1.3%
<b>Passive Mid Cap Equity</b>		
Internally Managed ASRS E3 - Growth	\$ 476.4	4.6%
Internally Managed ASRS E4 - Value	\$ 485.0	4.7%
<b>Total Mid Cap Equity</b>	<b>\$ 1,487.5</b>	<b>14.5%</b>
<b>Active Small Cap Equity</b>		
Champlain - Core	\$ 134.0	1.3%
TimesSquare - Growth	\$ 480.3	4.7%
DFA - Value	\$ 461.5	4.5%
<b>Passive Small Cap Equity</b>		
Internally Managed ASRS E6 - Core	\$ 467.8	4.5%
<b>Total Small Cap Equity</b>	<b>\$ 1,543.7</b>	<b>15.0%</b>
<b>Total Domestic Equity</b>	<b>\$ 10,288.1</b>	<b>100.0%</b>

\*Totals may not add to 100% due to rounding effects.

# U.S Equity Asset Class - Performance

- **The Overall ASRS U.S. Equity Asset Class has experienced -0.1% of alpha since inception (June 1975).**
  - Overall asset class performance:
    - 2011 Year: -0.6% (alpha); 36<sup>th</sup> percentile of ICC U.S. Equity Funds universe.
    - Three-Year: +0.7% (alpha); 54<sup>th</sup> percentile of ICC U.S. Equity Funds universe.
    - Five-Year: +0.4% (alpha); 56<sup>th</sup> percentile of ICC U.S. Equity Funds universe.
    - Ten-Year: +0.7% (alpha); 73<sup>rd</sup> percentile of ICC U.S. Equity Funds universe.
  - Overall asset class volatility: In line with the market (+0.36% vs. Blended Benchmark).
- **The Fund's Large Cap Equity portfolio has added 0.2% of alpha since inception (June 2002).**
  - **JACOBS LEVY** (*Large Cap Core 120/20, Quantitative*)
    - +5.4% alpha in 2011; -0.4% alpha since inception (October 2006).
    - More volatile performance than S&P 500 Index (21.2% s.d. vs. 18.6%).
  - **INTECH** (*Large Cap Growth, Quantitative*)
    - -2.8% alpha in 2011; +0.8% alpha since inception (December 2002).
    - Less volatile performance than S&P 500 Growth Index (13.8% s.d. vs. 14.4%).
  - **LSV** (*Large Cap Value, Quantitative*)
    - -0.4% alpha in 2011; +2.1% alpha since inception (December 2002).
    - More volatile performance than S&P 500 Value Index (18.2% s.d. vs. 16.7%).
  - **E1** (*Large Cap Core, Enhanced Passive*)
    - 0.0% alpha in 2011; 0.0% alpha since inception (September 1995).
    - Less volatile performance than S&P 500 Index (15.9% s.d. vs. 16.3%).
  - **E2** (*Large Cap Core, Passive*)
    - 0.0% alpha in 2011; +0.1% alpha since inception (March 1997).
    - Volatility is in line with the S&P 500 Index (16.6% s.d. vs. 16.6%).

*Note: Volatility statistics are calculated using data since inception.*



# U.S Equity Asset Class - Performance (Cont'd.)

- **The Fund's Mid Cap Equity portfolio has experienced -0.2% of alpha since inception (June 2002)**
  - **WELLINGTON** (*Mid Cap Core, Fundamental*)
    - -6.3% alpha 2011; +0.6% alpha since inception (June 2002).
    - Less volatile performance than S&P 400 Index (17.8% s.d. vs. 18.6%).
  - **CRM** (*Mid Cap Value, Fundamental*)
    - -4.1% alpha 2011; +0.5% alpha since inception (December 2003).
    - Less volatile performance than S&P 400 Value Index (16.4% s.d. vs. 19.3%).
  - **E3** (*Mid Cap Growth, Passive*)
    - +0.6% alpha in 2011; +0.7% alpha since inception (November 2000).
    - Less volatile performance than S&P 400 Growth Index (19.1% s.d. vs. 19.4%).
  - **E4** (*Mid Cap Value, Passive*)
    - -0.3% alpha in 2011; +0.3% alpha since inception (June 2002).
    - Less volatile performance than S&P 400 Value Index (19.0% s.d. vs. 19.3%).

*Note: Volatility statistics are calculated using data since inception.*

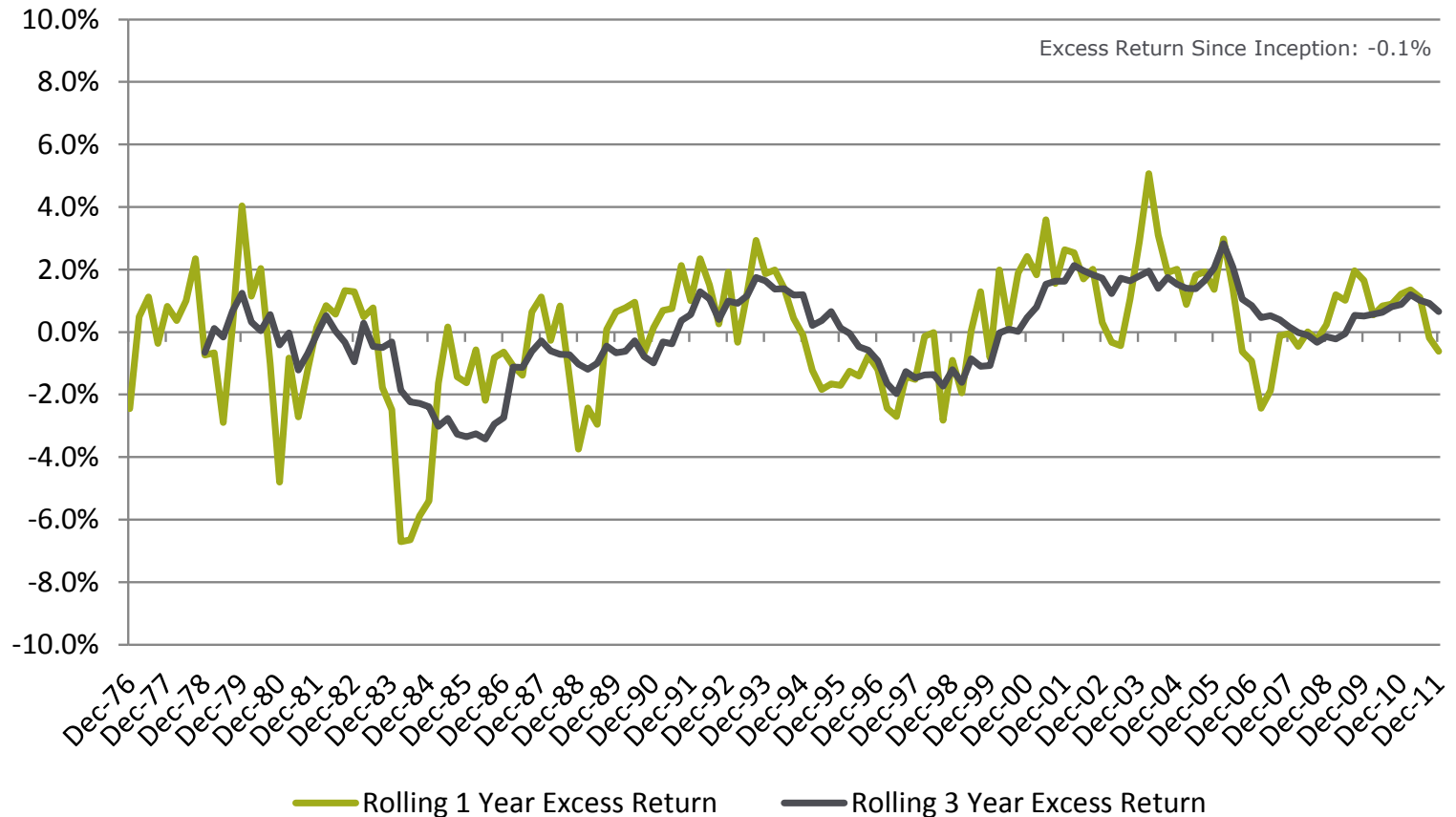
# U.S Equity Asset Class - Performance (Cont'd.)

- **The Fund's Small Cap Equity portfolio has added 0.6% of alpha since inception (June 2002).**
  - **TIMESQUARE** (*SMID Growth, Fundamental*)
    - +3.8% alpha 2011; +3.1% alpha since inception (March 2005).
    - Less volatile performance than Russell 2500 Growth Index (18.7% s.d. vs. 21.8%).
  - **Champlain** (*Small Cap Core, Fundamental*)
    - +3.3% alpha 2011; +2.8% alpha since inception (December 2007).
    - Less volatile performance than the S&P 600 Index (22.0% s.d. vs. 26.2%).
  - **DFA** (*Small Cap Value, Quantitative*)
    - -5.2% alpha in 2011; +1.0% alpha since inception (August 1998).
    - More volatile performance than DFA Blended Benchmark (29.7% s.d. vs. 27.0%).
  - **E6** (*Small Cap Core, Passive*)
    - -0.4% alpha in 2011; +0.6% alpha since inception (January 2007).
    - Less volatile performance than S&P 600 Index (23.7% s.d. vs. 24.1%).

*Note: Volatility statistics are calculated using data since inception.*

# U.S. Equity Rolling Excess Returns

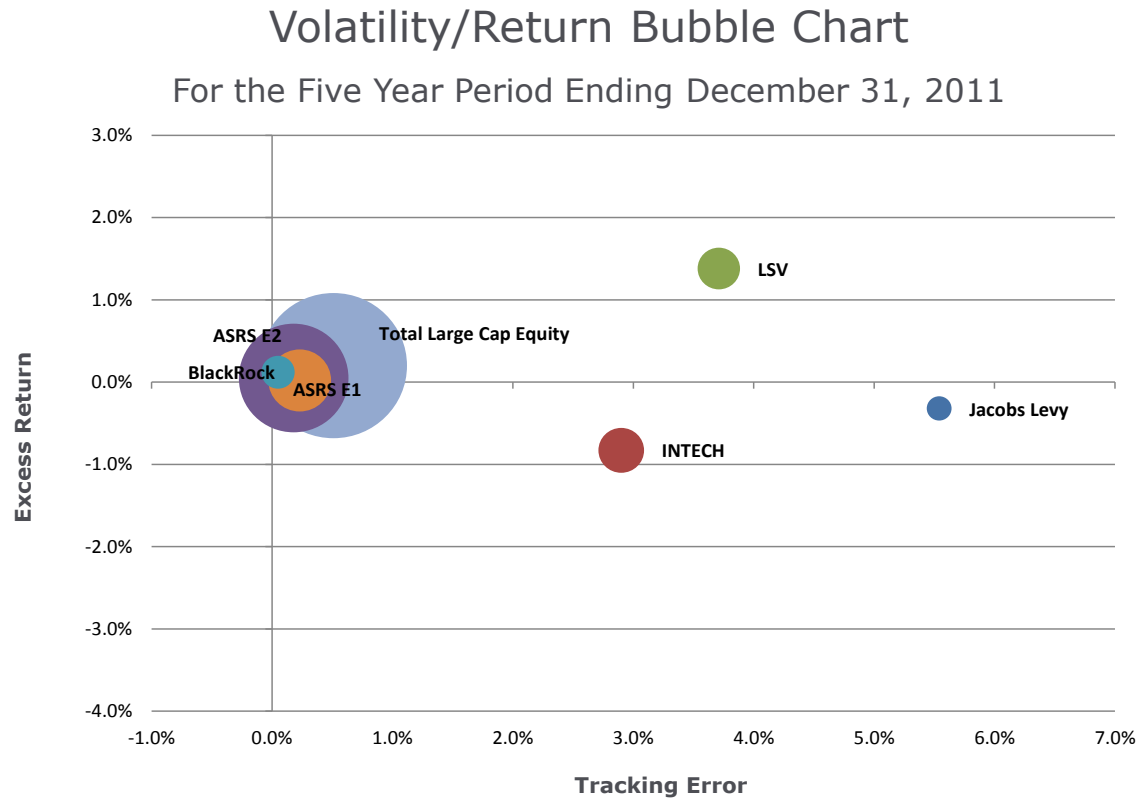
Combined Domestic Equity vs. Combined Domestic Equity Benchmark<sup>1</sup>  
Excess Returns Since Inception (June 30, 1975) – December 31, 2011



<sup>1</sup>Combined Domestic Equity Benchmark comprised of 74% S&P 500 / 13% S&P 400 / 13% S&P 600 from January 2007 – present. Prior to January 2007, the index was the S&P 500.

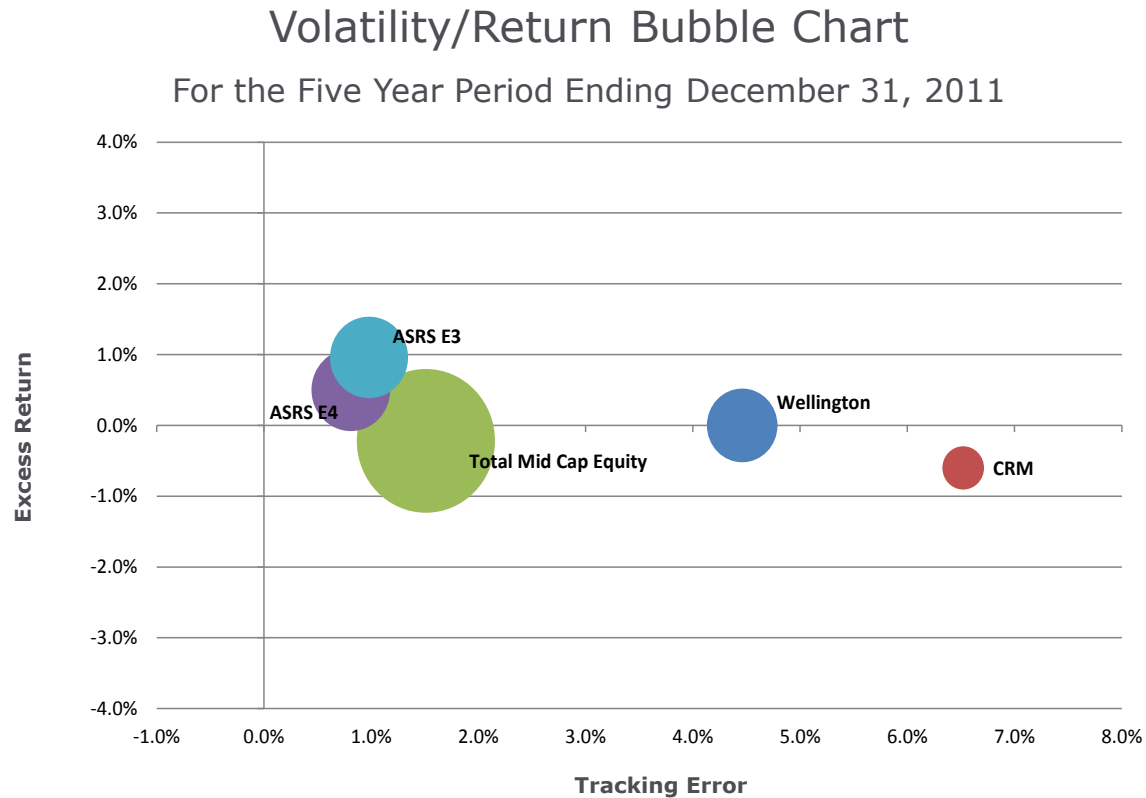
*Note: Based on quarterly, net of fee performance data, since inception.*

# U.S. Large Cap Equity Volatility/Return



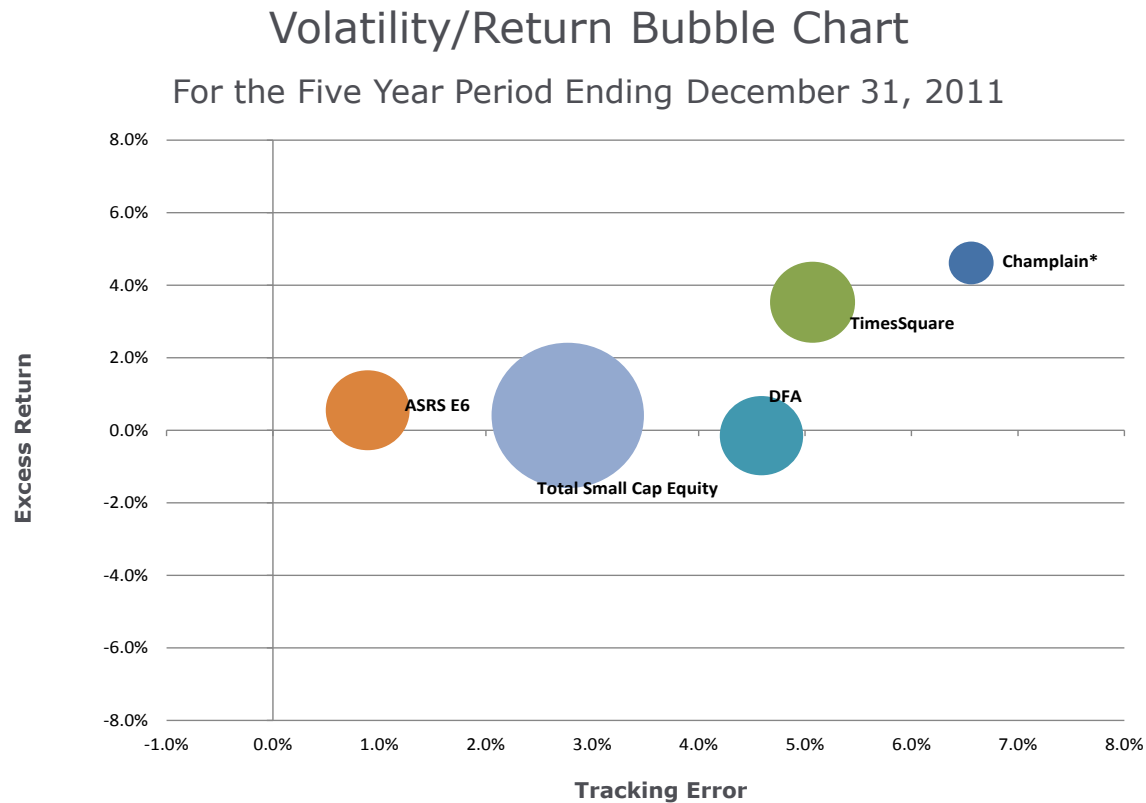
Manager	Portfolio Assets (\$MM)	Inception Date	Alpha	Tracking Error	Information Ratio
Jacobs Lewy	\$205.2	10/31/2006	-0.3%	5.5%	-0.1
INTECH	\$696.3	12/31/2002	-0.8%	2.9%	-0.3
LSV	\$603.0	12/31/2002	1.4%	3.7%	0.4
ASRS E1	\$1,330.6	9/30/1995	0.0%	0.2%	0.1
ASRS E2	\$4,048.0	3/31/1997	0.1%	0.2%	0.3
BlackRock	\$373.9	7/31/1989	0.1%	0.1%	2.4
<b>Total Large Cap Equity</b>	<b>\$7,256.9</b>	<b>6/30/2002</b>	<b>0.2%</b>	<b>0.5%</b>	<b>0.4</b>

# U.S. Mid Cap Equity Volatility/Return



Manager	Portfolio Assets (\$MM)	Inception Date	Alpha	Tracking Error	Information Ratio
Wellington	\$390.8	6/30/2002	0.0%	4.5%	0.0
CRM	\$135.3	12/31/2003	-0.6%	6.5%	-0.1
ASRS E3	\$476.4	11/30/2000	1.0%	1.0%	1.0
ASRS E4	\$485.0	6/30/2002	0.5%	0.8%	0.6
<b>Total Mid Cap Equity</b>	<b>\$1,487.5</b>	<b>6/30/2002</b>	<b>-0.3%</b>	<b>1.5%</b>	<b>-0.2</b>

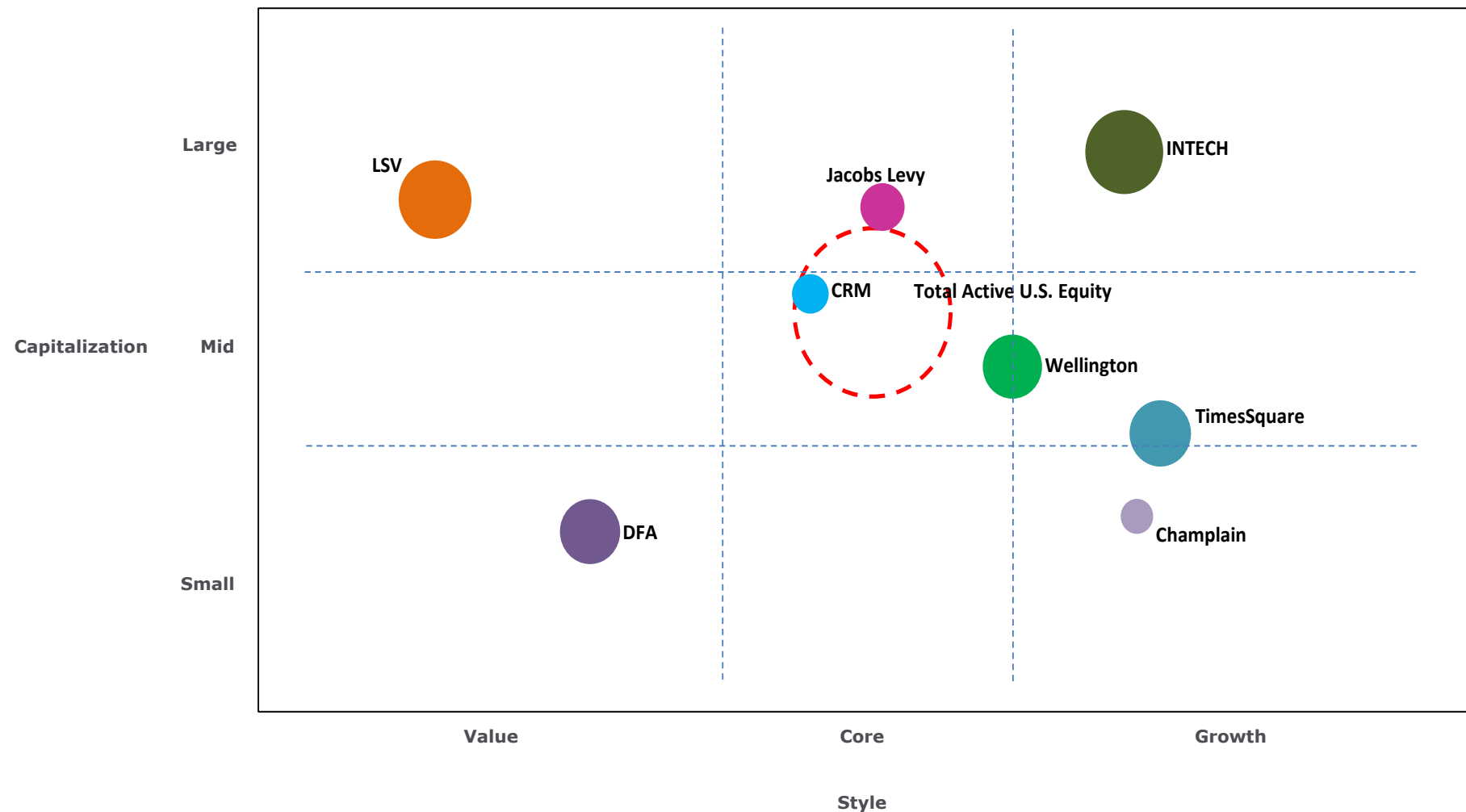
# U.S. Small Cap Equity Volatility/Return



Manager	Portfolio Assets (\$MM)	Inception Date	Alpha	Tracking Error	Information Ratio
Champlain*	\$134.0	12/31/2007	4.6%	6.6%	0.7
TimesSquare	\$480.3	3/31/2005	3.5%	5.1%	0.7
DFA	\$461.5	8/31/1998	-0.2%	4.6%	0.0
ASRS E6	\$467.8	1/31/2007	0.6%	0.9%	0.6
<b>Total Small Cap Equity</b>	<b>\$1,543.7</b>	<b>6/30/2002</b>	<b>0.4%</b>	<b>2.8%</b>	<b>0.2</b>

*\*Represents managers with less than five years of performance data; composite performance has been linked to ASRS portfolio performance. Champlain (Composite performance January 1996 – portfolio inception December 2007)*

# ASRS Total Active U.S. Equity Manager Style Analysis



*Note: Equity Style Analysis is based on Morningstar Size and VCG Scores and Morningstar Style Box™ methodology. Style analysis data based on holdings provided by the Fund's custodian bank as of 12/31/2011.*

# U.S. Large Cap Equity Performance

	Ending Market Value	Last Quarter	Rank	Six Months	Rank	One Year	Rank	Annualized Returns								Inception Date
								Three Years	Rank	Five Years	Rank	Ten Years	Rank	Since Inception		
<b>Total Domestic Equity</b>	<b>\$10,288,112,409</b>	<b>12.6%</b>	<b>45</b>	<b>-5.8%</b>	<b>34</b>	<b>0.8%</b>	<b>36</b>	<b>15.9%</b>	<b>54</b>	<b>0.9%</b>	<b>56</b>	<b>4.0%</b>	<b>73</b>	<b>10.7%</b>	<b>Jun-75</b>	
<i>ASRS Custom Domestic Equity Index <sup>1</sup></i>		12.8%		-4.9%		1.4%		15.2%		0.5%		3.3%		10.8%		
<b>Performance Variance (Return - Benchmark)</b>		<b>-0.2%</b>		<b>-0.8%</b>		<b>-0.6%</b>		<b>0.7%</b>		<b>0.4%</b>		<b>0.7%</b>		<b>-0.1%</b>		
ICC U.S. Equity Funds Median		12.3%		-7.5%		-0.8%		16.3%		1.5%		5.2%		--		
<b>Total Large Cap Equity</b>	<b>\$7,256,924,166</b>	<b>11.8%</b>	<b>43</b>	<b>-4.3%</b>	<b>29</b>	<b>1.9%</b>	<b>36</b>	<b>14.4%</b>	<b>52</b>	<b>-0.1%</b>	<b>55</b>	<b>n/a</b>		<b>4.8%</b>	<b>Jun-02</b>	
<i>S&amp;P 500</i>		11.8%		-3.7%		2.1%		14.1%		-0.3%		2.9%		4.6%		
<b>Performance Variance (Return - Benchmark)</b>		<b>-0.1%</b>		<b>-0.6%</b>		<b>-0.2%</b>		<b>0.2%</b>		<b>0.2%</b>		<b>n/a</b>		<b>0.2%</b>		
ICC Large Cap Equity Funds Median		11.5%		-6.0%		0.7%		14.5%		0.2%		4.4%		--		
ACTIVE LARGE CAP EQUITY																
<b>Jacobs Levy</b>	<b>\$205,187,022</b>	<b>9.8%</b>	<b>90</b>	<b>-5.0%</b>	<b>44</b>	<b>7.5%</b>	<b>3</b>	<b>16.6%</b>	<b>10</b>	<b>-0.6%</b>	<b>55</b>	<b>n/a</b>		<b>0.0%</b>	<b>Oct-06</b>	
<i>S&amp;P 500</i>		11.8%		-3.7%		2.1%		14.1%		-0.3%		2.9%		0.4%		
<b>Performance Variance (Return - Benchmark)</b>		<b>-2.0%</b>		<b>-1.3%</b>		<b>5.4%</b>		<b>2.5%</b>		<b>-0.3%</b>		<b>n/a</b>		<b>-0.4%</b>		
ICC Large Cap Core Equity Funds Median		11.8%		-5.1%		1.1%		14.2%		-0.1%		4.5%		--		
<b>INTECH</b>	<b>\$696,271,105</b>	<b>10.1%</b>	<b>39</b>	<b>-6.2%</b>	<b>45</b>	<b>1.8%</b>	<b>35</b>	<b>15.0%</b>	<b>60</b>	<b>1.6%</b>	<b>61</b>	<b>n/a</b>		<b>7.1%</b>	<b>Dec-02</b>	
<i>S&amp;P/Citigroup 500 Growth<sup>2</sup></i>		10.8%		-2.0%		4.7%		16.6%		2.4%		2.9%		6.3%		
<b>Performance Variance (Return - Benchmark)</b>		<b>-0.8%</b>		<b>-4.2%</b>		<b>-2.8%</b>		<b>-1.6%</b>		<b>-0.8%</b>		<b>n/a</b>		<b>0.8%</b>		
ICC Large Cap Growth Equity Funds Median		9.8%		-6.2%		0.2%		15.9%		2.3%		3.5%		--		
<b>LSV</b>	<b>\$603,014,067</b>	<b>15.1%</b>	<b>5</b>	<b>-7.5%</b>	<b>66</b>	<b>-0.9%</b>	<b>58</b>	<b>15.1%</b>	<b>15</b>	<b>-1.6%</b>	<b>33</b>	<b>n/a</b>		<b>8.0%</b>	<b>Dec-02</b>	
<i>S&amp;P/Citigroup 500 Value<sup>2</sup></i>		13.0%		-5.4%		-0.5%		11.6%		-3.0%		2.9%		5.9%		
<b>Performance Variance (Return - Benchmark)</b>		<b>2.1%</b>		<b>-2.1%</b>		<b>-0.4%</b>		<b>3.5%</b>		<b>1.4%</b>		<b>n/a</b>		<b>2.1%</b>		
ICC Large Cap Value Equity Funds Median		12.8%		-6.5%		0.0%		12.6%		-1.9%		5.0%		--		
ENHANCED/PASSIVE LARGE CAP EQUITY																
<b>Internally Managed E1</b>	<b>\$1,330,597,229</b>	<b>11.8%</b>	<b>47</b>	<b>-3.7%</b>	<b>19</b>	<b>2.1%</b>	<b>31</b>	<b>14.2%</b>	<b>49</b>	<b>-0.2%</b>	<b>59</b>	<b>3.0%</b>	<b>84</b>	<b>6.7%</b>	<b>Sep-95</b>	
<i>S&amp;P 500</i>		11.8%		-3.7%		2.1%		14.1%		-0.3%		2.9%		6.7%		
<b>Performance Variance (Return - Benchmark)</b>		<b>0.0%</b>		<b>0.0%</b>		<b>0.0%</b>		<b>0.1%</b>		<b>0.0%</b>		<b>0.1%</b>		<b>0.0%</b>		
<b>Internally Managed E2</b>	<b>\$4,047,969,189</b>	<b>11.8%</b>	<b>48</b>	<b>-3.7%</b>	<b>20</b>	<b>2.1%</b>	<b>31</b>	<b>14.2%</b>	<b>51</b>	<b>-0.2%</b>	<b>58</b>	<b>3.0%</b>	<b>87</b>	<b>5.5%</b>	<b>Mar-97</b>	
<i>S&amp;P 500</i>		11.8%		-3.7%		2.1%		14.1%		-0.3%		2.9%		5.4%		
<b>Performance Variance (Return - Benchmark)</b>		<b>0.0%</b>		<b>0.0%</b>		<b>0.0%</b>		<b>0.1%</b>		<b>0.1%</b>		<b>0.1%</b>		<b>0.1%</b>		
<b>BlackRock Large Cap Equity Index</b>	<b>\$373,885,555</b>	<b>11.8%</b>	<b>50</b>	<b>-3.7%</b>	<b>20</b>	<b>2.2%</b>	<b>27</b>	<b>14.3%</b>	<b>46</b>	<b>-0.1%</b>	<b>52</b>	<b>3.0%</b>	<b>86</b>	<b>8.3%</b>	<b>Jul-89</b>	
<i>S&amp;P 500</i>		11.8%		-3.7%		2.1%		14.1%		-0.3%		2.9%		8.2%		
<b>Performance Variance (Return - Benchmark)</b>		<b>0.0%</b>		<b>0.0%</b>		<b>0.1%</b>		<b>0.2%</b>		<b>0.1%</b>		<b>0.1%</b>		<b>0.0%</b>		
ICC Large Cap Core Equity Funds Median		11.8%		-5.1%		1.1%		14.2%		-0.1%		4.5%		--		

<sup>1</sup>ASRS Custom Domestic Equity Index was S&P 500 through 12/31/2006; 74% S&P 500, 13% S&P 400, 13% S&P 600 through 12/31/2010; 70% S&P 500, 15% S&P 400 and 15% S&P 600 thereafter.

<sup>2</sup>In mid-December 2005, the S&P/Citigroup style indices replaced the S&P/Barra style indices. Returns are a blend of S&P/Barra indices prior to mid-December 2005, and S&P/Citigroup indices going forward.

Note: Performance is reported net of fees. Ranks and ICC medians are based on gross of fee performance data.



# U.S. Mid Cap Equity Performance

	Ending Market Value	Last Quarter	Rank	Six Months	Rank	One Year	Rank	Annualized Returns						Since Inception	Inception Date
								Three Years	Rank	Five Years	Rank	Ten Years	Rank		
<b>Total Mid Cap Equity</b>	<b>\$1,487,513,102</b>	<b>12.2%</b>	<b>69</b>	<b>-11.0%</b>	<b>68</b>	<b>-3.7%</b>	<b>63</b>	<b>18.2%</b>	<b>64</b>	<b>3.1%</b>	<b>50</b>	<b>n/a</b>		<b>7.6%</b>	<b>Jun-02</b>
<i>S&amp;P MidCap 400</i>		13.0%		-9.5%		-1.7%		19.6%		3.3%		7.0%		7.8%	
<b>Performance Variance (Return - Benchmark)</b>		<b>-0.7%</b>		<b>-1.6%</b>		<b>-1.9%</b>		<b>-1.4%</b>		<b>-0.3%</b>		<b>n/a</b>		<b>-0.2%</b>	
ICC Mid Cap Equity Funds Median		13.4%		-9.5%		-1.2%		19.9%		3.2%		7.5%		--	
<b>ACTIVE MID CAP EQUITY</b>															
<b>Wellington</b>	<b>\$390,804,873</b>	<b>11.3%</b>	<b>86</b>	<b>-13.6%</b>	<b>90</b>	<b>-8.0%</b>	<b>94</b>	<b>14.0%</b>	<b>88</b>	<b>3.3%</b>	<b>30</b>	<b>n/a</b>		<b>8.4%</b>	<b>Jun-02</b>
<i>S&amp;P MidCap 400</i>		13.0%		-9.5%		-1.7%		19.6%		3.3%		7.0%		7.8%	
<b>Performance Variance (Return - Benchmark)</b>		<b>-1.7%</b>		<b>-4.1%</b>		<b>-6.3%</b>		<b>-5.6%</b>		<b>0.0%</b>		<b>n/a</b>		<b>0.6%</b>	
ICC Mid Cap Core Equity Funds Median		14.0%		-9.3%		-1.6%		19.3%		2.8%		7.9%		--	
<b>Cramer, Rosenthal &amp; McGlynn</b>	<b>\$135,291,795</b>	<b>9.4%</b>	<b>82</b>	<b>-13.6%</b>	<b>92</b>	<b>-6.5%</b>	<b>72</b>	<b>12.8%</b>	<b>83</b>	<b>0.8%</b>	<b>45</b>	<b>n/a</b>		<b>6.8%</b>	<b>Dec-03</b>
<i>S&amp;P/Citigroup 400 Value<sup>1</sup></i>		15.9%		-8.4%		-2.4%		17.0%		1.4%		7.5%		6.3%	
<b>Performance Variance (Return - Benchmark)</b>		<b>-6.4%</b>		<b>-5.2%</b>		<b>-4.1%</b>		<b>-4.2%</b>		<b>-0.6%</b>		<b>n/a</b>		<b>0.5%</b>	
ICC Mid Cap Value Equity Funds Median		13.7%		-10.2%		-4.2%		17.9%		0.9%		n/a		--	
<b>PASSIVE MID CAP EQUITY</b>															
<b>Internally Managed E3</b>	<b>\$476,381,776</b>	<b>10.6%</b>	<b>74</b>	<b>-10.4%</b>	<b>53</b>	<b>-0.4%</b>	<b>39</b>	<b>23.2%</b>	<b>34</b>	<b>6.2%</b>	<b>38</b>	<b>7.1%</b>	<b>65</b>	<b>6.2%</b>	<b>Nov-00</b>
<i>S&amp;P/Citigroup 400 Growth<sup>1</sup></i>		10.3%		-10.5%		-0.9%		22.2%		5.3%		6.5%		5.5%	
<b>Performance Variance (Return - Benchmark)</b>		<b>0.3%</b>		<b>0.1%</b>		<b>0.6%</b>		<b>1.0%</b>		<b>1.0%</b>		<b>0.6%</b>		<b>0.7%</b>	
ICC Mid Cap Growth Equity Funds Median		13.1%		-10.2%		-0.7%		21.8%		4.1%		7.4%		--	
<b>Internally Managed E4</b>	<b>\$485,034,659</b>	<b>15.5%</b>	<b>32</b>	<b>-8.8%</b>	<b>44</b>	<b>-2.7%</b>	<b>48</b>	<b>17.0%</b>	<b>61</b>	<b>1.9%</b>	<b>30</b>	<b>n/a</b>		<b>7.7%</b>	<b>Jun-02</b>
<i>S&amp;P/Citigroup 400 Value<sup>1</sup></i>		15.9%		-8.4%		-2.4%		17.0%		1.4%		7.5%		7.4%	
<b>Performance Variance (Return - Benchmark)</b>		<b>-0.4%</b>		<b>-0.4%</b>		<b>-0.3%</b>		<b>0.0%</b>		<b>0.5%</b>		<b>n/a</b>		<b>0.3%</b>	
ICC Mid Cap Value Equity Funds Median		13.7%		-10.2%		-4.2%		17.9%		0.9%		n/a		--	

<sup>1</sup>In mid-December 2005, the S&P/Citigroup style indices replaced the S&P/Barra style indices. Returns are a blend of S&P/Barra indices prior to mid-December 2005, and S&P/Citigroup indices going forward.

Note: Performance is reported net of fees. Ranks and ICC medians are based on gross of fee performance data.

# U.S. Small Cap Equity Performance

	Ending Market Value	Last Quarter	Rank	Six Months	Rank	One Year	Rank	Annualized Returns								Inception Date
								Three Years	Rank	Five Years	Rank	Ten Years	Rank	Since Inception		
<b>Total Small Cap Equity</b>	<b>\$1,543,675,141</b>	<b>16.6%</b>	<b>28</b>	<b>-7.4%</b>	<b>31</b>	<b>-0.8%</b>	<b>36</b>	<b>18.4%</b>	<b>52</b>	<b>2.4%</b>	<b>52</b>	<b>n/a</b>		<b>8.1%</b>	<b>Jun-02</b>	
<i>ASRS Custom Small Cap Equity Blended Benchmark<sup>1</sup></i>		17.2%		-6.1%		1.0%		17.0%		2.0%		6.6%		7.5%		
<b>Performance Variance (Return - Benchmark)</b>		<b>-0.5%</b>		<b>-1.3%</b>		<b>-1.9%</b>		<b>1.4%</b>		<b>0.4%</b>		<b>n/a</b>		<b>0.6%</b>		
ICC Small Cap Equity Funds Median		15.1%		-9.1%		-2.0%		19.1%		2.7%		8.1%		--		
ACTIVE SMALL/MID CAP EQUITY																
<b>TimesSquare</b>	<b>\$480,326,436</b>	<b>17.5%</b>	<b>10</b>	<b>-5.6%</b>	<b>14</b>	<b>2.2%</b>	<b>32</b>	<b>21.9%</b>	<b>28</b>	<b>6.4%</b>	<b>9</b>	<b>n/a</b>		<b>8.9%</b>	<b>Mar-05</b>	
<i>Russell 2500 Growth</i>		13.5%		-10.7%		-1.6%		21.6%		2.9%		5.2%		5.8%		
<b>Performance Variance (Return - Benchmark)</b>		<b>4.0%</b>		<b>5.1%</b>		<b>3.8%</b>		<b>0.3%</b>		<b>3.5%</b>		<b>n/a</b>		<b>3.1%</b>		
ICC Small Cap Growth Equity Funds Median		13.6%		-10.2%		0.4%		20.6%		4.0%		6.8%		--		
ACTIVE SMALL CAP EQUITY																
<b>Champlain</b>	<b>\$134,037,717</b>	<b>13.6%</b>	<b>81</b>	<b>-4.5%</b>	<b>8</b>	<b>4.3%</b>	<b>3</b>	<b>17.6%</b>	<b>38</b>	<b>n/a</b>		<b>n/a</b>		<b>5.3%</b>	<b>Dec-07</b>	
<i>S&amp;P 600</i>		17.2%		-6.1%		1.0%		17.0%		1.9%		7.1%		2.5%		
<b>Performance Variance (Return - Benchmark)</b>		<b>-3.6%</b>		<b>1.6%</b>		<b>3.3%</b>		<b>0.6%</b>		<b>n/a</b>		<b>n/a</b>		<b>2.8%</b>		
ICC Small Cap Core Equity Funds Median		15.7%		-9.0%		-2.3%		17.1%		2.2%		8.2%		--		
<b>DFA</b>	<b>\$461,517,178</b>	<b>16.2%</b>	<b>42</b>	<b>-11.1%</b>	<b>76</b>	<b>-6.5%</b>	<b>59</b>	<b>18.6%</b>	<b>52</b>	<b>0.0%</b>	<b>63</b>	<b>8.0%</b>	<b>72</b>	<b>10.3%</b>	<b>Aug-98</b>	
<i>DFA Blended Benchmark<sup>2</sup></i>		18.6%		-5.2%		-1.4%		14.8%		0.1%		7.5%		9.3%		
<b>Performance Variance (Return - Benchmark)</b>		<b>-2.4%</b>		<b>-5.9%</b>		<b>-5.2%</b>		<b>3.8%</b>		<b>-0.2%</b>		<b>0.5%</b>		<b>1.0%</b>		
ICC Small Cap Value Equity Funds Median		15.9%		-8.8%		-5.5%		18.8%		1.4%		8.5%		--		
PASSIVE SMALL CAP EQUITY																
<b>Internally Managed E6</b>	<b>\$467,793,344</b>	<b>17.2%</b>	<b>29</b>	<b>-6.2%</b>	<b>22</b>	<b>0.7%</b>	<b>18</b>	<b>17.0%</b>	<b>53</b>	<b>n/a</b>		<b>n/a</b>		<b>2.1%</b>	<b>Jan-07</b>	
<i>S&amp;P 600</i>		17.2%		-6.1%		1.0%		17.0%		1.9%		7.1%		1.5%		
<b>Performance Variance (Return - Benchmark)</b>		<b>0.0%</b>		<b>-0.1%</b>		<b>-0.4%</b>		<b>-0.1%</b>		<b>n/a</b>		<b>n/a</b>		<b>0.6%</b>		
ICC Small Cap Core Equity Funds Median		15.7%		-9.0%		-2.3%		17.1%		2.2%		8.2%		--		

<sup>1</sup>ASRS Custom Small Cap Equity Blended Benchmark is a blend of the Russell 2000 Index prior to January 2007, and the S&P 600 Index from January 2007 - forward.

<sup>2</sup>DFA Blended Benchmark is a blend of the Russell 2000 Value Index prior to January 2007, and the S&P/Citigroup 600 Value Index from January 2007 - forward.

Note: Performance is reported net of fees. Ranks and ICC medians are based on gross of fee performance data.

# Takeaways and Other Discussion Topics

- **Large Cap Equity**
  - Active quantitative strategies (INTECH, and LSV) lagged in 2011, though Jacobs Levy performed well after a challenging 2010.
  - Jacobs Levy was the only active manager to produce positive relative performance in 2011.
- **Mid Cap Equity**
  - All active managers struggled in 2011, hindering aggregate mid-cap equity 2011 returns.
  - E3 outperformed by 0.6% in 2011; while E4 trailed its index by 0.3%.
- **Small Cap Equity**
  - Fundamental active managers performed well on a relative basis in 2011, significantly outperforming their respective benchmarks.
  - DFA's quantitative strategy's poor performance and sizeable weight (~30%) in the portfolio detracted significant alpha.
- **Other Topics**
  - Relative Valuations: Large Cap vs. Mid Cap vs. Small Cap.
  - Recent IMD portfolio rebalancings.

# Manager Assessment (NEPC)

Manager	Strategy	Conviction Level	NEPC Focused Placement List Strategy
Jacobs Levy	Enhanced Large Cap Core	Mild	No
INTECH	Active Large Cap Growth	Mild	No
LSV	Active Large Cap Value	High	Yes
Wellington	Active Mid Cap Core	Mild	No
CRM	Active Mid Cap Value	Mild	Closed
TimesSquare	Active Small/Mid Cap Growth	Mild	Closed
Champlain	Active Small Cap Core	High	Closed <sup>1</sup>
DFA	Active Small Cap Value	High	Yes <sup>2</sup>

“High Conviction Level” strategies denote NEPC’s belief that the manager has above average prospects of generating alpha going forward.

“Mild Conviction Level” strategies denote NEPC’s belief that the manager has average prospects of generating alpha going forward.

“Low Conviction Level” strategies denote NEPC’s belief that the manager has below average prospects of generating alpha going forward.

NEPC’s Focused Placement List represents internally vetted managers and strategies we put forward to clients who are conducting a search. Criteria for inclusion vary per asset class.

<sup>1</sup>Champlain’s Mid Cap Core strategy is on NEPC’s Focused Placement List

<sup>2</sup>DFA US Targeted Small Cap Value Mutual Fund is on NEPC’s Focused Placement List

# **U.S. Large Cap Equity Manager Review (Individual)**

**Note: All of the data in this section is as of December 31, 2011, unless otherwise noted.**

# Jacobs Levy

## Qualitative Analysis

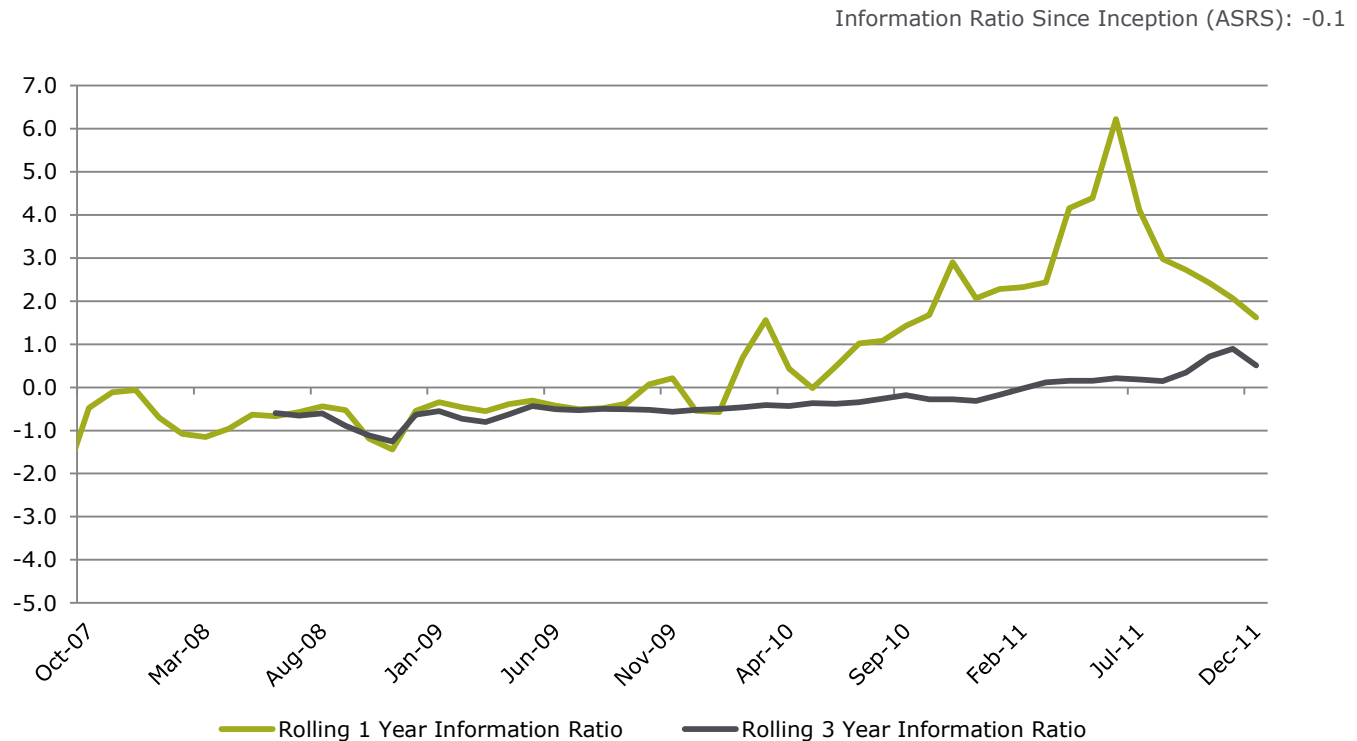
Factors	Description
People	<ul style="list-style-type: none"> <li>• Jacobs Levy is an independent investment firm. Principals Bruce Jacobs and Ken Levy founded the firm in 1986 and serve as Co-Portfolio Managers and Co-Directors of Research.</li> <li>• The research team is composed of three senior researchers, all with Ph.D. degrees, and twelve Investment Systems Analysts, all with advanced degrees, including three with Ph.D. degrees.</li> <li>• Trading and portfolio engineering comprises three traders, including the head trader, and six portfolio engineers and data analysts, including the head of portfolio engineering.</li> </ul>
Philosophy	<ul style="list-style-type: none"> <li>• Believe market inefficiencies can be detected and exploited by “disentangling” stock returns to find true sources of alpha.</li> <li>• Believe one must maintain a dynamic and forward-looking approach.</li> </ul>
Process	<ul style="list-style-type: none"> <li>• Models look at company information, human behavior, security pricing and economic conditions.</li> <li>• Long/short investing permits more meaningful security under- and overweights.</li> <li>• Optimizer integrates the long and short positions relative to benchmark weights, accounts for hard to borrow stocks and actively limits the downside on short positions.</li> <li>• Sophisticated trading techniques and capacity constraints minimize transaction costs.</li> <li>• No leverage is used to obtain market exposure; short sales pay for additional longs; longs serve as collateral for shorts.</li> <li>• Broadly diversified across stocks, market inefficiencies and sectors.</li> </ul>

## Jacobs Levy vs. S&P 500 Excess Returns Since Inception<sup>1</sup> (June 30, 2005) – December 31, 2011



<sup>1</sup>Net of fee performance of the Jacobs Levy 120/20 Composite is linked with ASRS portfolio performance. Composite data provided by Jacobs Levy Equity Management. Inception date of the ASRS portfolio is October 31, 2006.  
*Note: Based on monthly, net of fee performance data, since inception.*

## Jacobs Levy vs. S&P 500 Information Ratios Since Inception<sup>1</sup> (June 30, 2005) – December 31, 2011



<sup>1</sup>Net of fee performance of the Jacobs Levy 120/20 Composite is linked with ASRS portfolio performance. Composite data provided by Jacobs Levy Equity Management. Inception date of the ASRS portfolio is October 31, 2006.  
*Note: Based on monthly, net of fee performance data, since inception.*



## Jacobs Levy vs. S&P 500

### Risk and Return Characteristics vs. U.S. 120/20 Extended Equity Universe

For the three-year period ending December 31, 2011



	Excess Return	Standard Deviation	Tracking Error	Information Ratio	Sharpe Ratio	Beta
Jacobs Levy	2.9%	20.3%	4.8%	0.6	0.8	1.0
Rank	11	81	23	21	25	20
5th Percentile	6.8%	18.1%	8.0%	1.0	1.0	1.1
Upper Quartile	1.5%	18.6%	4.7%	0.5	0.8	1.0
Median	-0.1%	19.2%	3.8%	0.0	0.7	1.0
Lower Quartile	-1.6%	19.9%	3.3%	-0.4	0.6	1.0
95th Percentile	-4.2%	22.1%	2.3%	-0.8	0.5	0.9
Observations	50	50	50	50	50	50

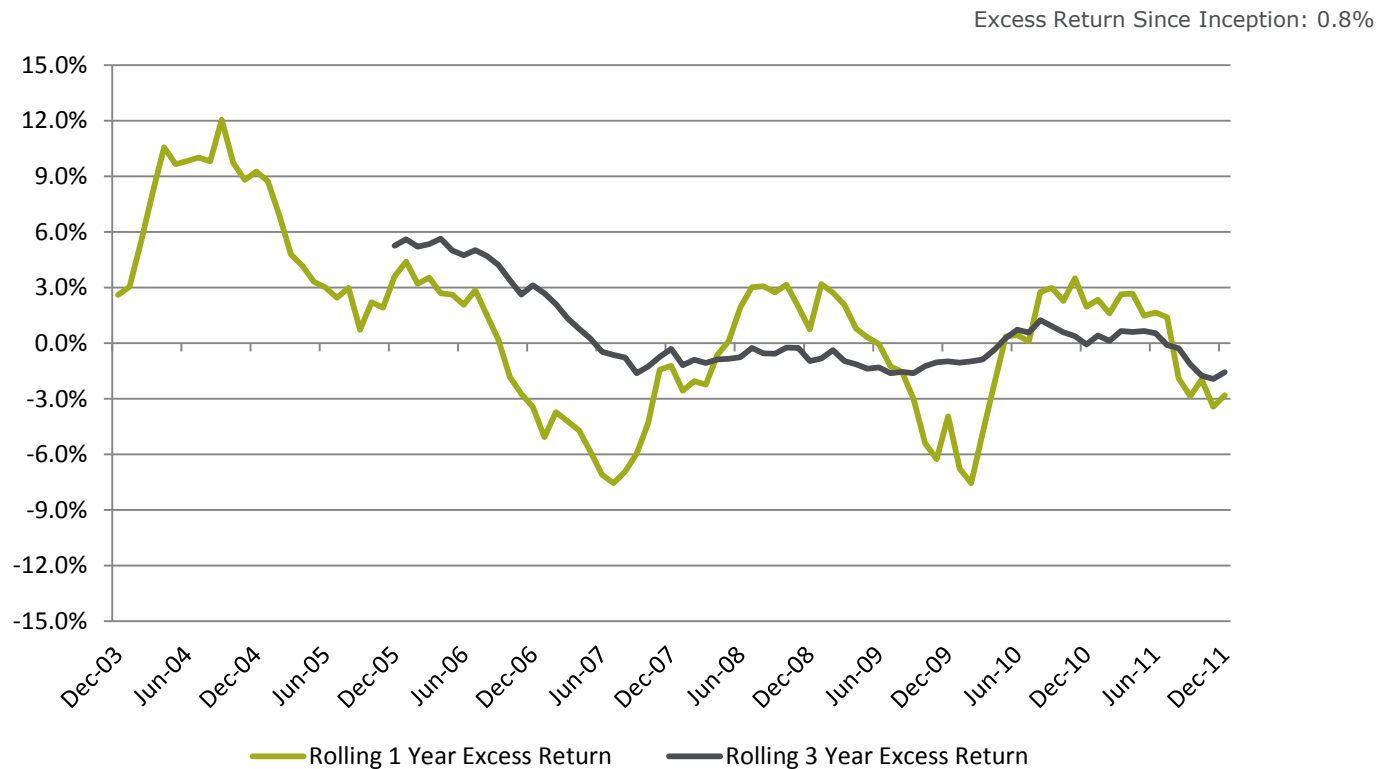
Note: Based on monthly, gross of fee performance data, since inception. Universe rankings are against the eVestment Alliance universe of managers as of December 31, 2011.

# INTECH

## Qualitative Analysis

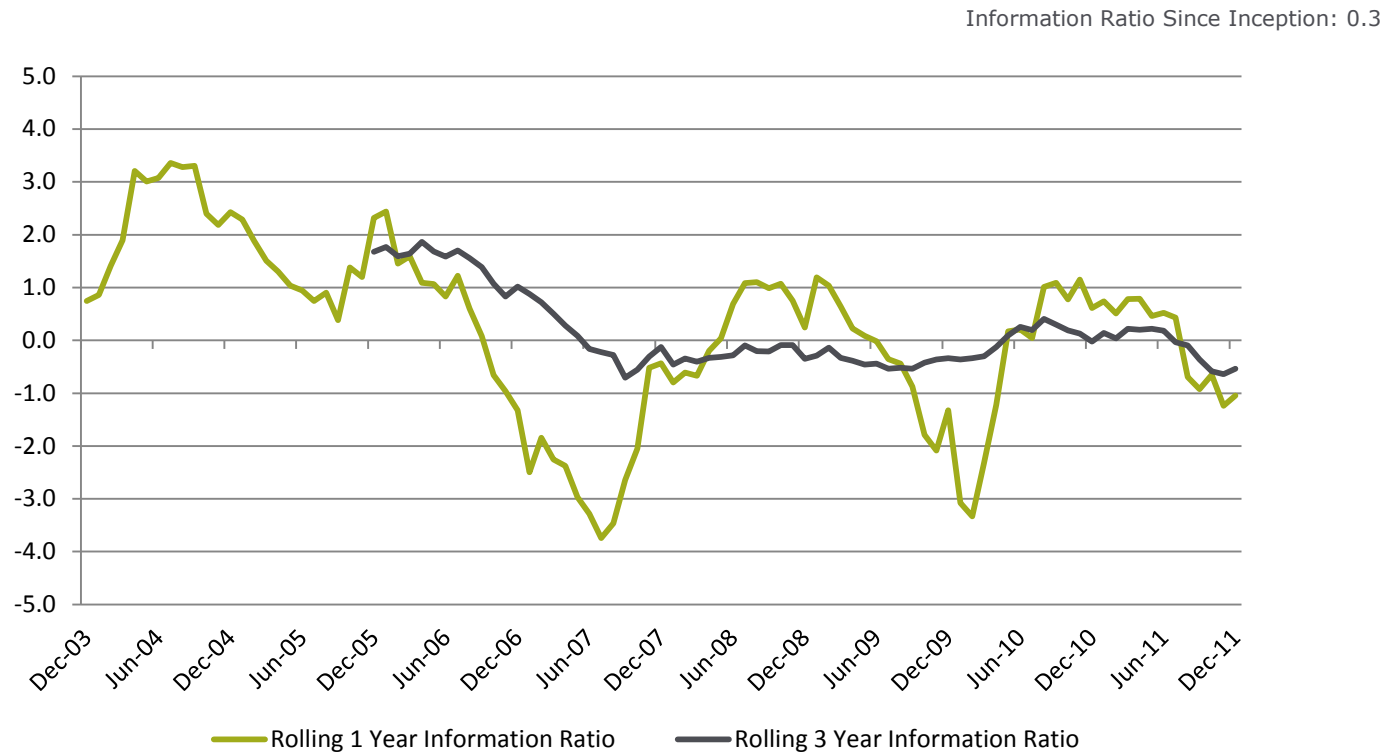
Factors	Description
People	<ul style="list-style-type: none"> <li>• All portfolios are managed on a team basis.</li> <li>• The investment team is led by Dr. Adrian Banner, Chief Investment Officer. Dr. Banner is responsible for all final decisions regarding portfolio management, which involves ultimate responsibility for the optimization process. No deviation by individual portfolio managers is authorized.</li> </ul>
Philosophy	<ul style="list-style-type: none"> <li>• Based on the research of Dr. Robert Fernholz, INTECH is focused on providing a unique, innovative and scientifically based approach to portfolio management by applying mathematics to the portfolio construction process. INTECH believes it can add value using natural stock price volatility through a mathematically based, risk-managed process.</li> <li>• INTECH does not pick individual stocks or forecast stock alphas, but uses natural stock price volatility and correlation characteristics to attempt to generate excess returns. Essentially, INTECH adjusts the market cap weights of an index portfolio to potentially more efficient combinations.</li> </ul>
Process	<ul style="list-style-type: none"> <li>• INTECH seeks to re-weight the benchmark index to a more efficient combination.</li> <li>• Utilize the relative volatility of stock prices to attempt to capture excess returns as opposed to predicting alpha.</li> <li>• The only input to the investment process is historical stock price. The investment process attempts to combine stocks with high relative volatility and low correlation in target weightings in a portfolio designed to provide excess return while minimizing risk.</li> <li>• Optimization and rebalancing is key to maintaining weights over time.</li> <li>• All research is oriented towards mathematical finance and its application to portfolio management and system improvements.</li> </ul>

## INTECH vs. S&P/Citigroup 500 Growth<sup>1</sup> Excess Returns Since Inception (December 31, 2002) – December 31, 2011



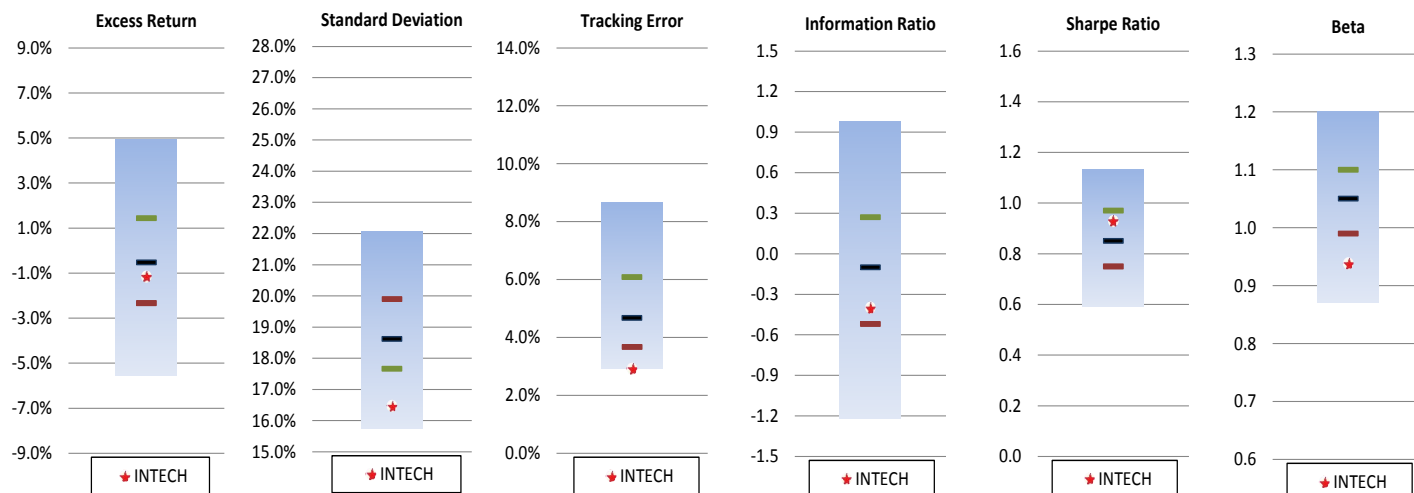
<sup>1</sup>In mid-December 2005, the S&P/Citigroup style indices replaced the S&P/Barra style indices. Returns are a blend of S&P/Barra 500 Growth Index prior to mid-December 2005, and S&P/Citigroup 500 Growth Index going forward.  
Note: Based on monthly, net of fee performance data, since inception.

## INTECH vs. S&P/Citigroup 500 Growth<sup>1</sup> Information Ratios Since Inception (December 31, 2002) – December 31, 2011



<sup>1</sup>In mid-December 2005, the S&P/Citigroup style indices replaced the S&P/Barra style indices. Returns are a blend of S&P/Barra 500 Growth Index prior to mid-December 2005, and S&P/Citigroup 500 Growth Index going forward.  
Note: Based on monthly, net of fee performance data, since inception.

## INTECH vs. S&P/Citigroup 500 Growth<sup>1</sup> Risk and Return Characteristics vs. U.S. Large Cap Growth Equity Universe For the three-year period ending December 31, 2011



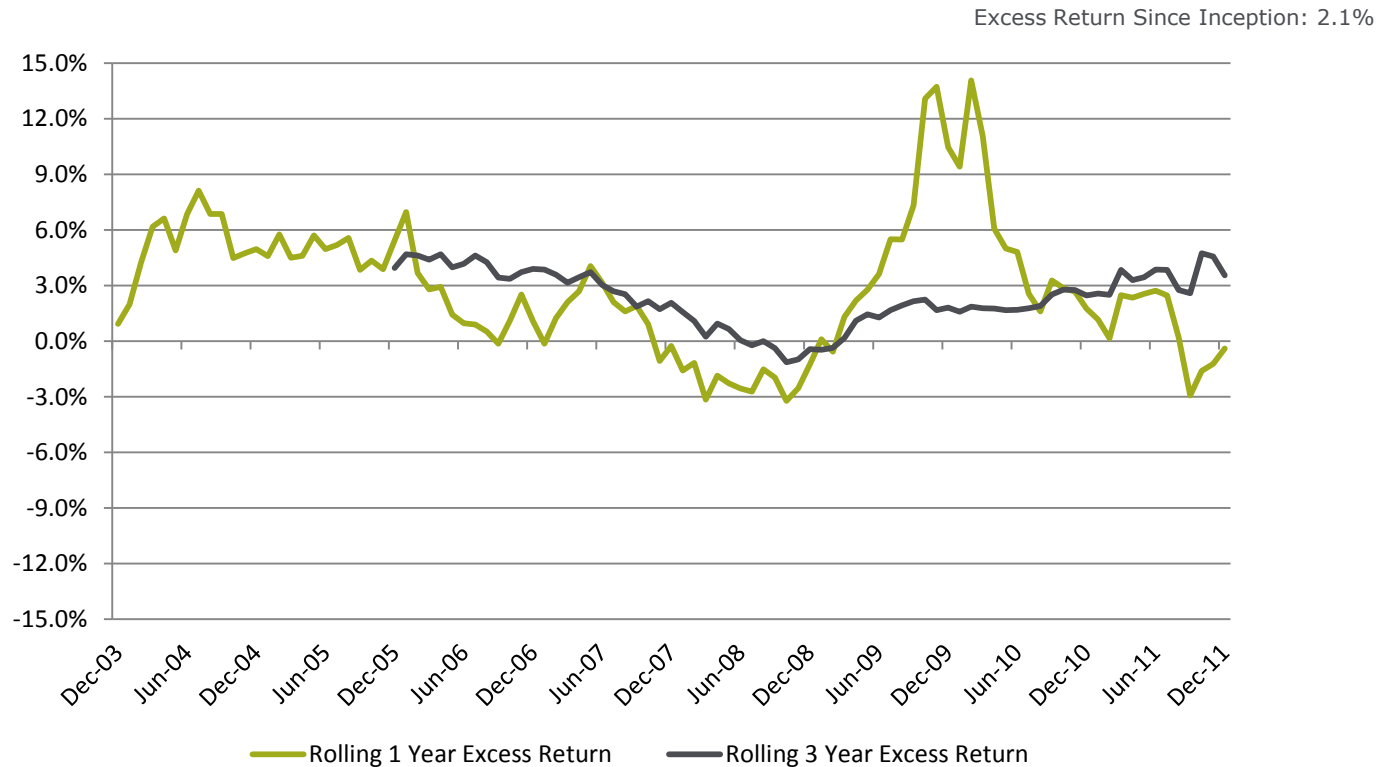
	Excess Return	Standard Deviation	Tracking Error	Information Ratio	Sharpe Ratio	Beta
INTECH	-1.2%	16.5%	2.9%	-0.4	0.9	0.9
Rank	60	9	96	69	31	90
5th Percentile	4.9%	15.8%	8.7%	1.0	1.1	1.2
Upper Quartile	1.4%	17.7%	6.1%	0.3	1.0	1.1
Median	<b>-0.5%</b>	<b>18.6%</b>	<b>4.7%</b>	<b>-0.1</b>	<b>0.9</b>	<b>1.1</b>
Lower Quartile	-2.3%	19.9%	3.7%	-0.5	0.8	1.0
95th Percentile	-5.6%	22.1%	3.0%	-1.2	0.6	0.9
Observations	348	348	348	348	348	348

<sup>1</sup>In mid-December 2005, the S&P/Citigroup style indices replaced the S&P/Barra style indices. Returns are a blend of S&P/Barra 500 Growth Index prior to mid-December 2005, and S&P/Citigroup 500 Growth Index going forward.

Note: Based on monthly, gross of fee performance data, since inception. Universe rankings are against the eVestment Alliance universe of managers as of December 31, 2011.

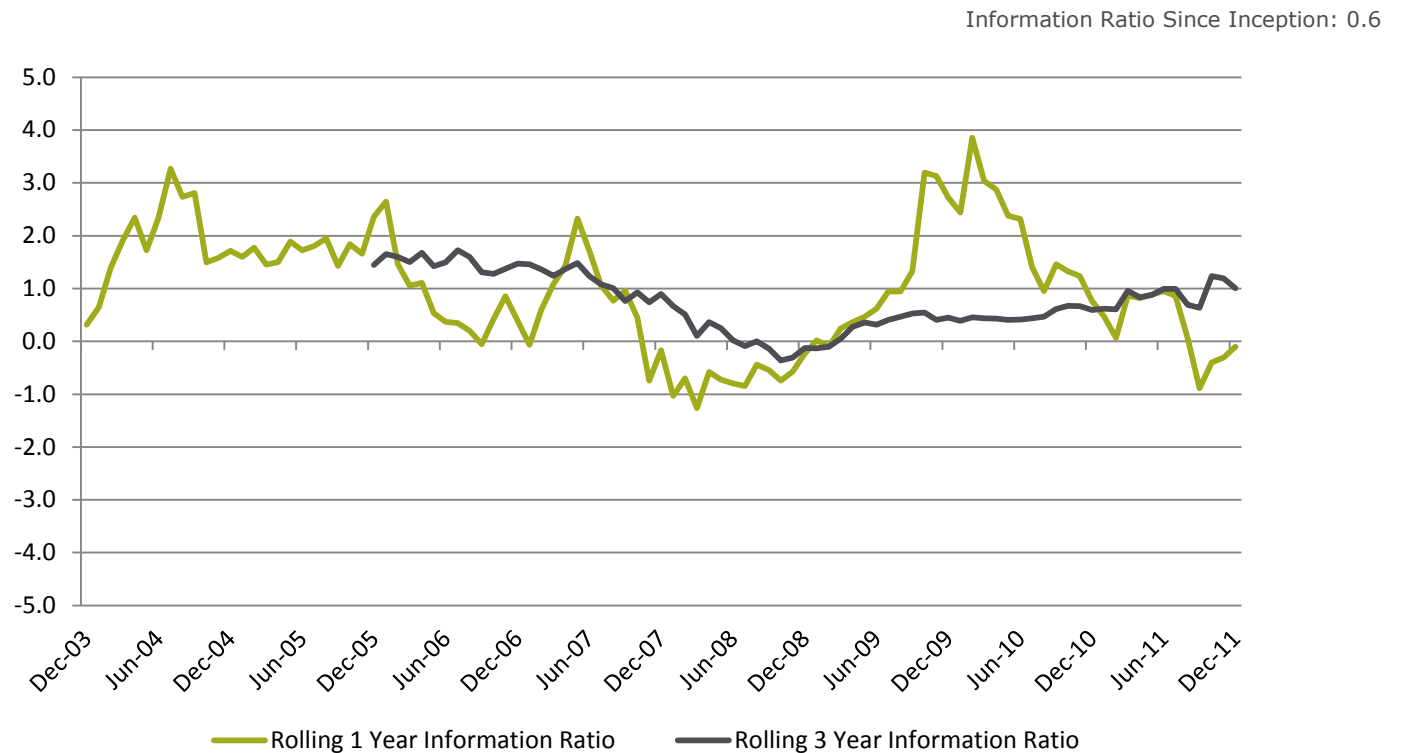
Factors	Description
People	<ul style="list-style-type: none"> <li>• No turnover in investment management team.</li> <li>• The same team of academics and quantitative analysts is responsible for managing all value equity portfolios.</li> </ul>
Philosophy	<ul style="list-style-type: none"> <li>• Based on original academic research in behavioral finance, LSV believes markets are inefficient as investors tend to extrapolate past performance too far into the future.</li> </ul>
Process	<ul style="list-style-type: none"> <li>• Quantitative approach ranks stocks on fundamental measures of value, past performance and indicators of near-term potential.</li> <li>• Portfolio is optimized to ensure the portfolio is broadly diversified across industries and companies.</li> <li>• Control tracking error relative to the benchmark by maintaining strict buy/sell criteria.</li> <li>• Deep value orientation.</li> <li>• The competitive strength of this strategy is that it avoids introducing to the process and judgmental biases and behavioral weaknesses that often influence investment decisions.</li> </ul>

# LSV vs. S&P/Citigroup 500 Value<sup>1</sup> Excess Returns Since Inception (December 31, 2002) – December 31, 2011



<sup>1</sup>In mid-December 2005, the S&P/Citigroup style indices replaced the S&P/Barra style indices. Returns are a blend of S&P/Barra 500 Value Index prior to mid-December 2005, and S&P/Citigroup 500 Value Index going forward.  
Note: Based on monthly, net of fee performance data, since inception.

# LSV vs. S&P/Citigroup 500 Value<sup>1</sup> Information Ratios Since Inception (December 31, 2002) – December 31, 2011



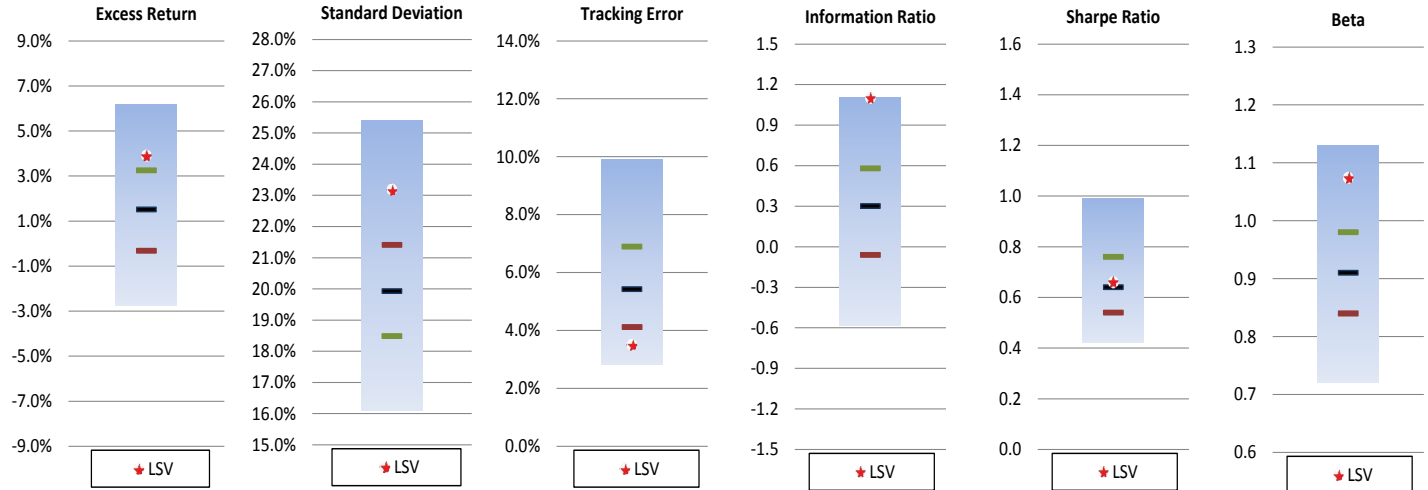
<sup>1</sup>In mid-December 2005, the S&P/Citigroup style indices replaced the S&P/Barra style indices. Returns are a blend of S&P/Barra 500 Value Index prior to mid-December 2005, and S&P/Citigroup 500 Value Index going forward.  
Note: Based on monthly, net of fee performance data, since inception.



# LSV vs. S&P/Citigroup 500 Value<sup>1</sup>

## Risk and Return Characteristics vs. U.S. Large Cap Value Equity Universe

For the three-year period ending December 31, 2011



	Excess Return	Standard Deviation	Tracking Error	Information Ratio	Sharpe Ratio	Beta
LSV	3.9%	23.2%	3.5%	1.1	0.7	1.1
Rank	18	89	85	3	48	7
5th Percentile	6.2%	16.1%	9.9%	0.9	1.0	1.1
Upper Quartile	3.3%	18.5%	6.9%	0.6	0.8	1.0
Median	1.5%	19.9%	5.4%	0.3	0.6	0.9
Lower Quartile	-0.3%	21.4%	4.1%	-0.1	0.5	0.8
95th Percentile	-2.8%	25.4%	2.8%	-0.6	0.4	0.7
Observations	376	376	376	376	376	376

<sup>1</sup>In mid-December 2005, the S&P/Citigroup style indices replaced the S&P/Barra style indices. Returns are a blend of S&P/Barra 500 Value Index prior to mid-December 2005, and S&P/Citigroup 500 Value Index going forward.

Note: Based on monthly, gross of fee performance data, since inception. Universe rankings are against the eVestment Alliance universe of managers as of December 31, 2011.

# **U.S. Mid Cap Equity Manager Review (Individual)**

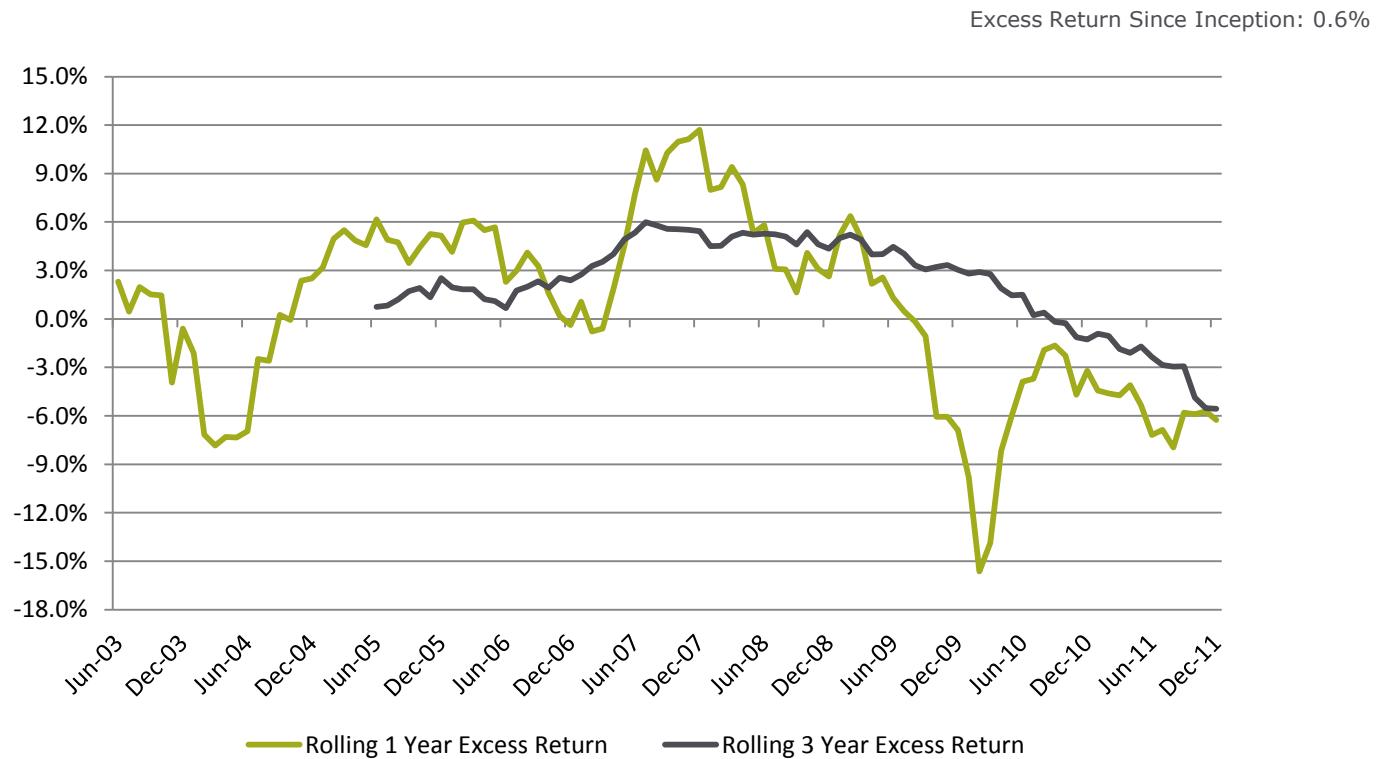
**Note: All of the data in this section is as of December 31, 2011, unless otherwise noted.**

# Wellington

## Qualitative Analysis

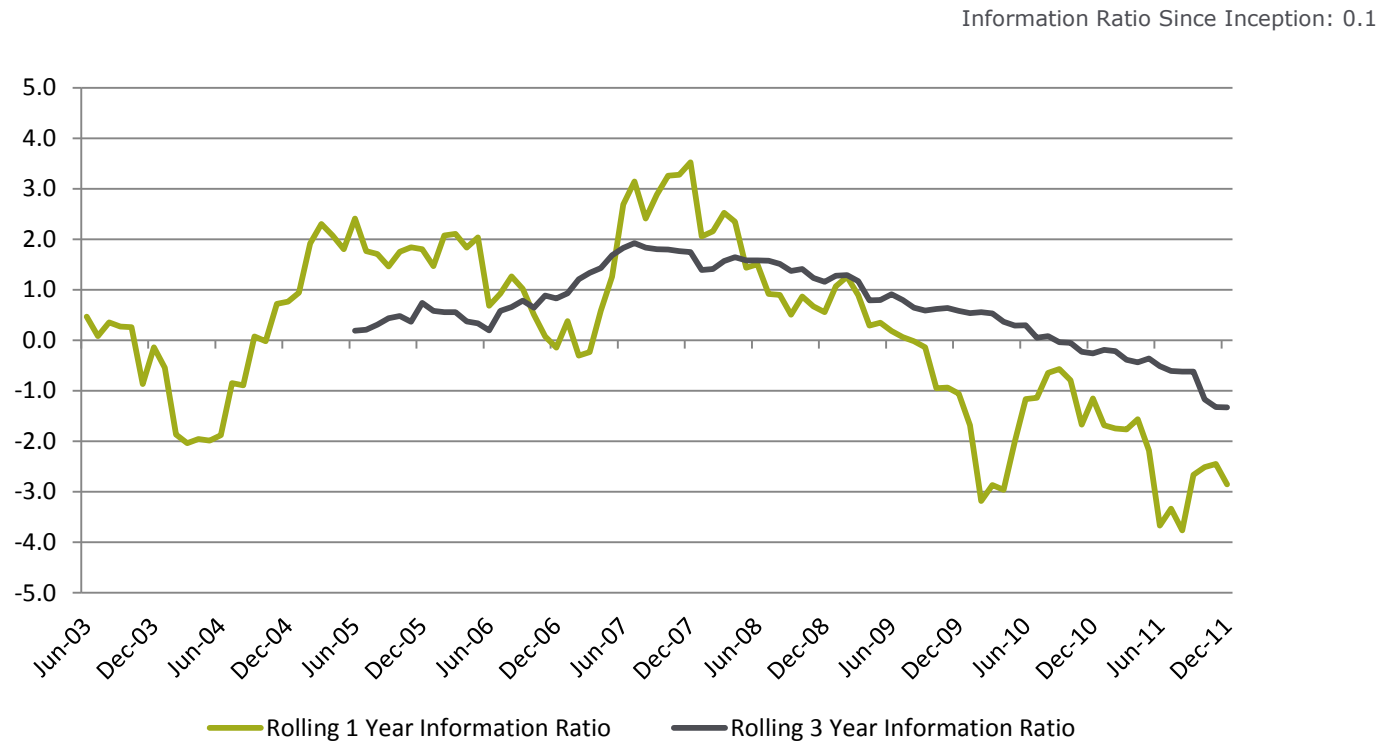
Factors	Description
People	<ul style="list-style-type: none"> <li>Experienced portfolio management team led by Portfolio Manager Phil Ruedi. Phil Ruedi is supported by Portfolio Manager Mark Whitaker, Equity Research Analyst Joe Sicilian and the broad resources of Wellington, including the global industry analysts.</li> <li>Portfolio Manager Phil Perelmuter transitioned off the investment team to take on a new role as Director, Investment Research as of May 1, 2011, and Phil Ruedi became Portfolio Manager at that time. Phil Ruedi shares the same investment philosophy and process, and has worked closely with Phil Perelmuter since 2004.</li> <li>Stable team of Global Industry Analysts average 19 years experience, 10 years with Wellington.</li> </ul>
Philosophy	<ul style="list-style-type: none"> <li>Wellington believes investing in high quality, established mid cap companies with good balance sheets, strong management teams and market leadership within their respective industry can lead to superior performance over time.</li> <li>The portfolio seeks to meet three imperatives: quality, diversification and purity.</li> </ul>
Process	<ul style="list-style-type: none"> <li>Investment ideas are generated from the team, analysts and bottom-up research. In this process, themes and trends that create tailwinds for portfolio holdings are often identified.</li> <li>Will typically buy a stock when it is determined upside potential is twice the downside risk.</li> <li>Look for names with accelerating revenue growth, accelerating earnings growth, high market share, quality balance sheets, and strong management teams at attractive valuations.</li> <li>Portfolio consists of mix of "core" and "opportunistic" holdings. "Opportunistic" holdings can be statistically cheap, but possess short term catalysts over the next 6-12 months.</li> <li>As a mid cap core portfolio, the portfolio will demonstrate a slight growth bias at times.</li> </ul>

## Wellington vs. S&P 400 Excess Returns Since Inception (June 30, 2002) – December 31, 2011



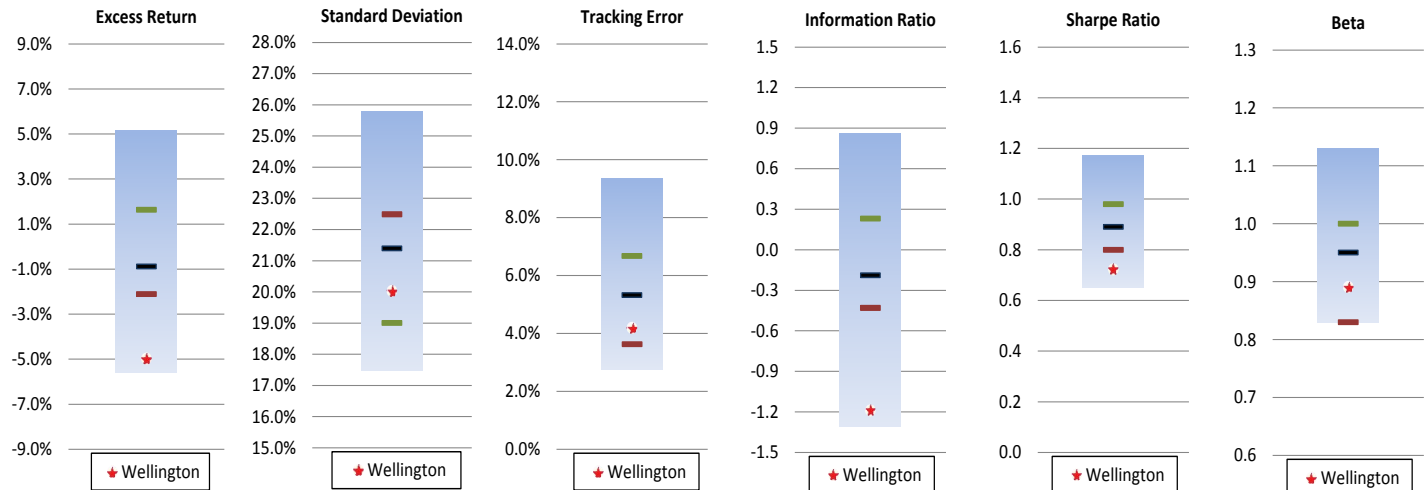
*Note: Based on monthly, net of fee performance data, since inception.*

## Wellington vs. S&P 400 Information Ratios Since Inception (June 30, 2002) – December 31, 2011



Note: Based on monthly, net of fee performance data, since inception.

## Wellington vs. S&P 400 Risk and Return Characteristics vs. U.S. Mid Cap Core Equity Universe For the three-year period ending December 31, 2011



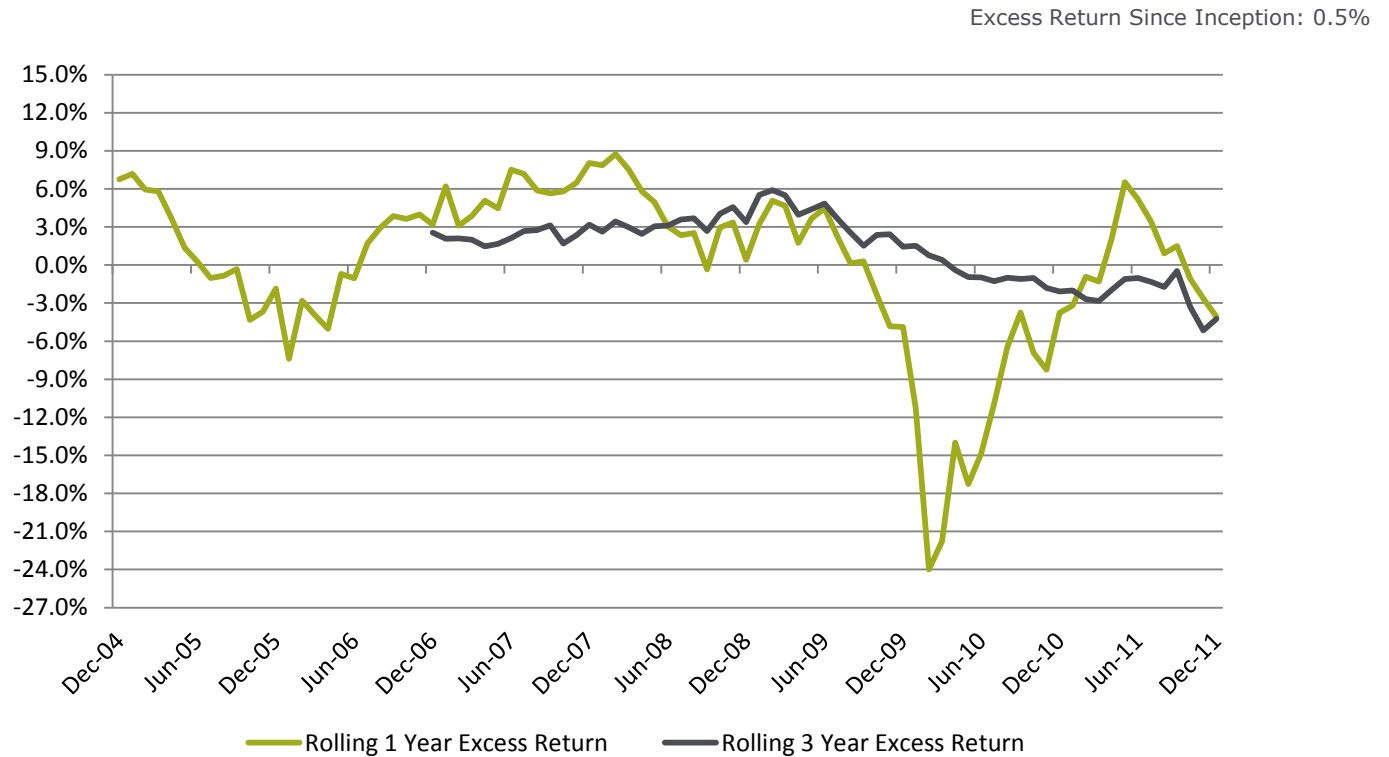
	Excess Return	Standard Deviation	Tracking Error	Information Ratio	Sharpe Ratio	Beta
Wellington	-5.0%	20.0%	4.2%	-1.2	0.7	0.9
Rank	91	34	67	92	88	64
5th Percentile	5.2%	17.5%	9.4%	0.9	1.2	1.1
Upper Quartile	1.6%	19.0%	6.7%	0.2	1.0	1.0
Median	<b>-0.9%</b>	<b>21.4%</b>	<b>5.3%</b>	<b>-0.2</b>	<b>0.9</b>	<b>1.0</b>
Lower Quartile	-2.1%	22.5%	3.6%	-0.4	0.8	0.8
95th Percentile	-5.6%	25.8%	2.7%	-1.3	0.7	0.8
Observations	74	74	74	74	74	74

*Note: Based on monthly, gross of fee performance data, since inception. Universe rankings are against the eVestment Alliance universe of managers as of December 31, 2011.*

<b>Factors</b>	<b>Description</b>
People	<ul style="list-style-type: none"><li>• Two Co-Portfolio Managers are the primary decision makers, but the process is very team oriented. Analysts are key to determining the weighting of names in the portfolio.</li><li>• Highly experienced team of sector-specialized analysts all use the same philosophy and process when researching stocks.</li></ul>
Philosophy	<ul style="list-style-type: none"><li>• Believe that opportunities exist in under-followed, out-of-favor companies that are undergoing strategic changes such as divestitures, new products, new management, mergers and acquisitions.</li></ul>
Process	<ul style="list-style-type: none"><li>• Screen for stocks with attractive liquidity characteristics that are mispriced in the market.</li><li>• Attempt to identify a dynamic change that is material to the operations of the company.</li><li>• Produce financial models based upon projected cash flows.</li><li>• Monitor the number of opinions of sell side analysts who closely follow the company and the nature of the shareholder base.</li><li>• Set a price target for every name in the portfolio.</li><li>• Use “mosaic theory” approach to investment management.</li></ul>

## CRM vs. S&P/Citigroup 400 Value<sup>1</sup>

Excess Returns Since Inception (December 31, 2003) – December 31, 2011



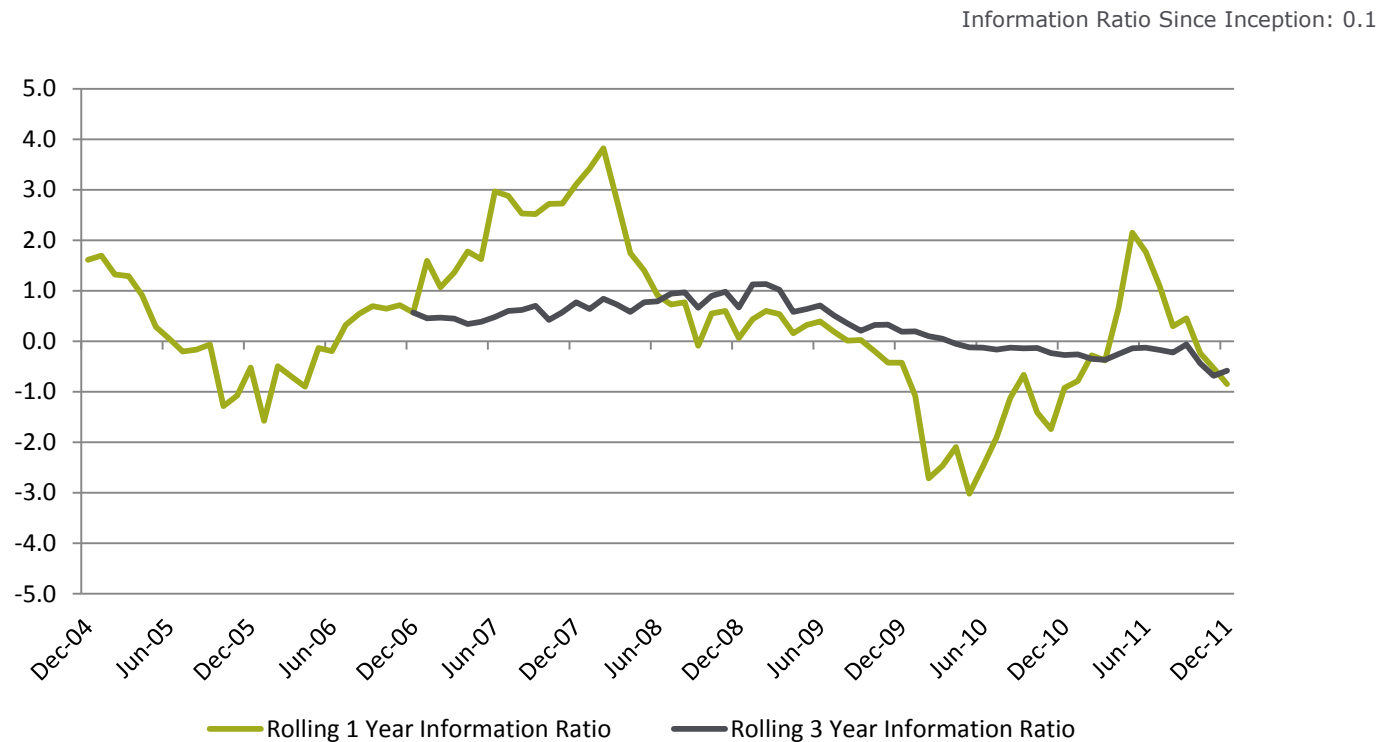
<sup>1</sup>In mid-December 2005, the S&P/Citigroup style indices replaced the S&P/Barra style indices. Returns are a blend of S&P/Barra 400 Value Index prior to mid-December 2005, and S&P/Citigroup 400 Value Index going forward.

Note: Based on monthly, net of fee performance data, since inception.



## CRM vs. S&P/Citigroup 400 Value<sup>1</sup>

Information Ratios Since Inception (December 31, 2003) – December 31, 2011

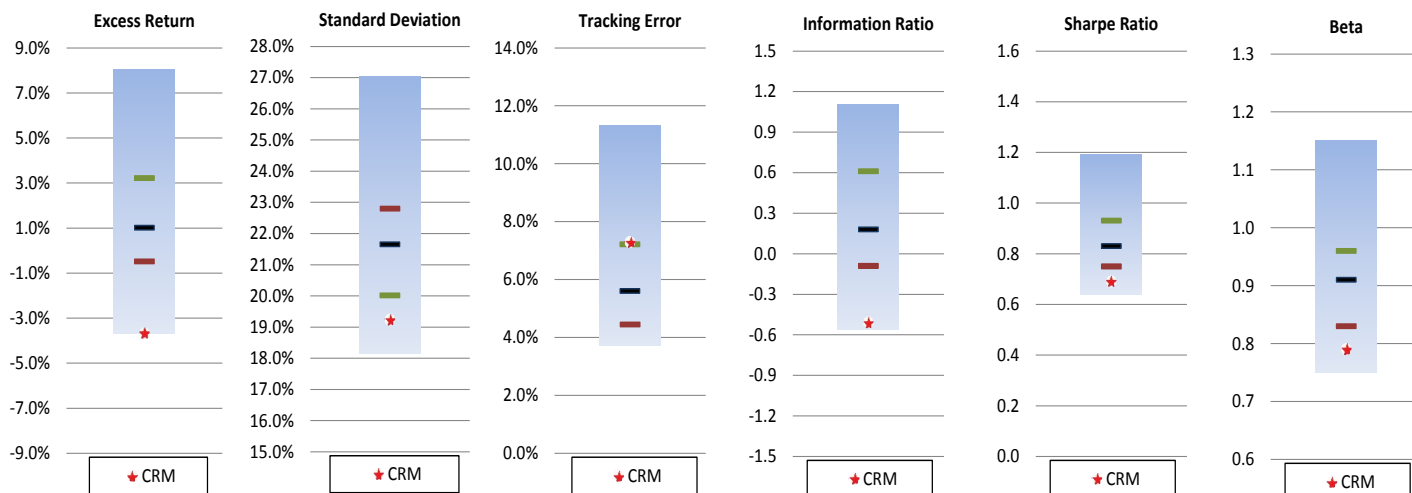


<sup>1</sup>In mid-December 2005, the S&P/Citigroup style indices replaced the S&P/Barra style indices. Returns are a blend of S&P/Barra 400 Value Index prior to mid-December 2005, and S&P/Citigroup 400 Value Index going forward.  
*Note: Based on monthly, net of fee performance data, since inception.*

## CRM vs. S&P/Citigroup 400 Value<sup>1</sup>

### Risk and Return Characteristics vs. U.S. Mid Cap Value Equity Universe

For the three-year period ending December 31, 2011



	Excess Return	Standard Deviation	Tracking Error	Information Ratio	Sharpe Ratio	Beta
CRM	-3.7%	19.2%	7.3%	-0.5	0.7	0.8
Rank	95	13	24	93	90	86
5th Percentile	8.0%	18.1%	11.3%	1.1	1.2	1.2
Upper Quartile	3.2%	20.0%	7.2%	0.6	0.9	1.0
Median	1.0%	21.7%	5.6%	0.2	0.8	0.9
Lower Quartile	-0.5%	22.8%	4.5%	-0.1	0.8	0.8
95th Percentile	-3.5%	27.0%	3.7%	-0.6	0.6	0.8
Observations	120	120	120	120	120	120

<sup>1</sup>In mid-December 2005, the S&P/Citigroup style indices replaced the S&P/Barra style indices. Returns are a blend of S&P/Barra 400 Value Index prior to mid-December 2005, and S&P/Citigroup 400 Value Index going forward.

*Note: Based on monthly, gross of fee performance data, since inception. Universe rankings are against the eVestment Alliance universe of managers as of December 31, 2011.*

# **U.S. Small Cap Equity Manager Review (Individual)**

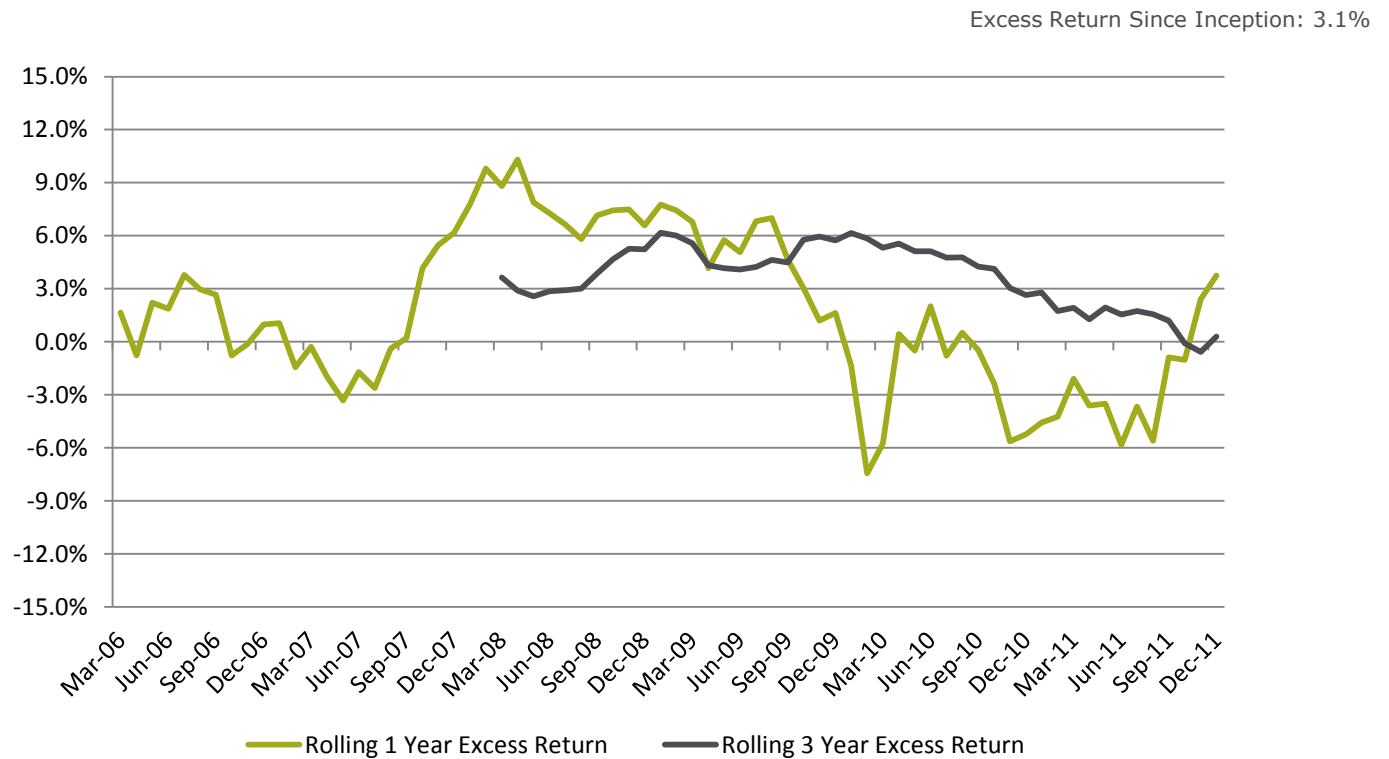
**Note: All of the data in this section is as of December 31, 2011, unless otherwise noted.**

# TimesSquare

## Qualitative Analysis

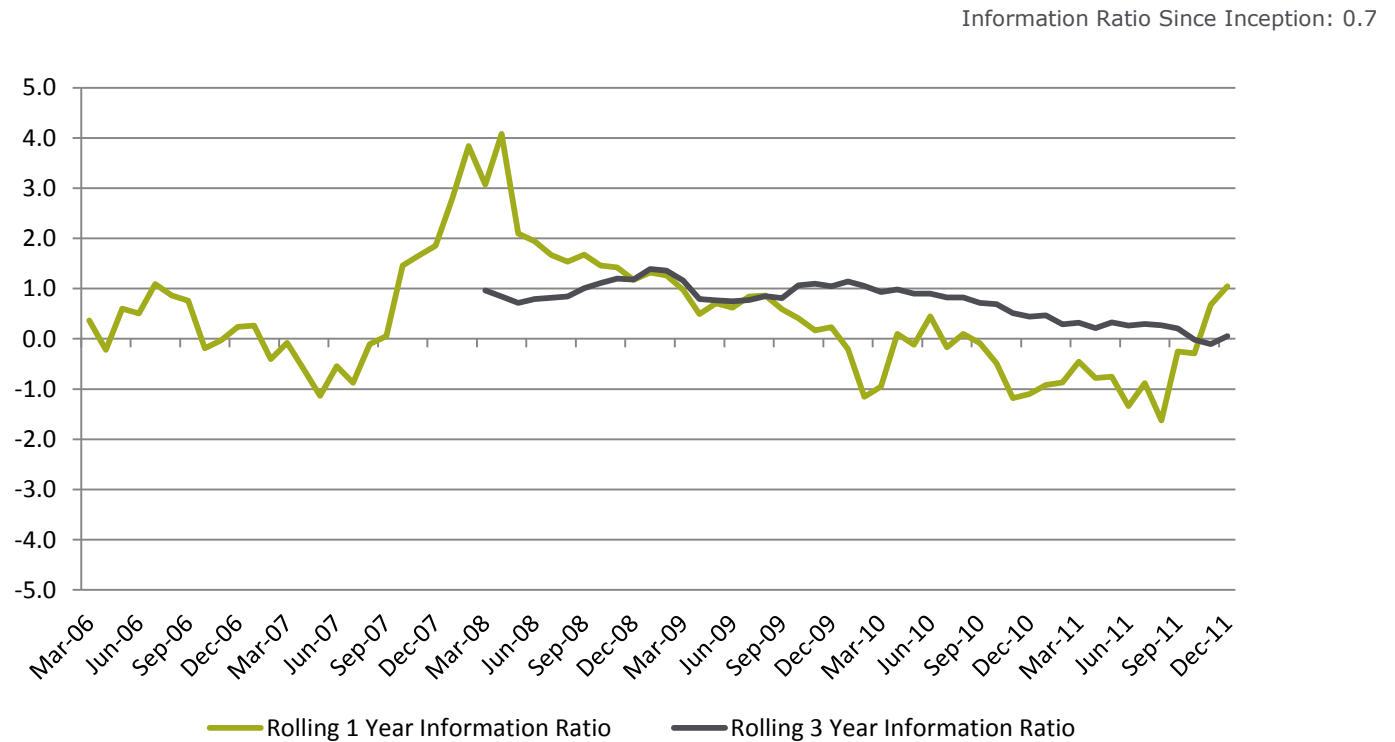
Factors	Description
People	<ul style="list-style-type: none"><li>• The quality of research and stability and experience of the investment team are strengths.</li><li>• Talented portfolio managers work well together and with the analyst team to apply the investment philosophy in a thorough and consistent manner.</li></ul>
Philosophy	<ul style="list-style-type: none"><li>• Believe research, which places a particular emphasis on the assessment of management quality and an in-depth understanding of superior business models, will result in superior risk-adjusted returns.</li></ul>
Process	<ul style="list-style-type: none"><li>• Look for stocks with market values between \$300 million and \$5 billion with an expected three-year EPS/Sales growth rate above 15%.</li><li>• Find companies with exceptional management, a sustainable competitive advantage and strong, consistent growth.</li><li>• Conduct further in-depth analysis through detailed financial modeling and valuation work.</li><li>• Purchase companies that have the potential to appreciate 35-50% over a 12-18 month time horizon.</li></ul>

## TimesSquare vs. Russell 2500 Growth Excess Returns Since Inception (March 31, 2005) – December 31, 2011



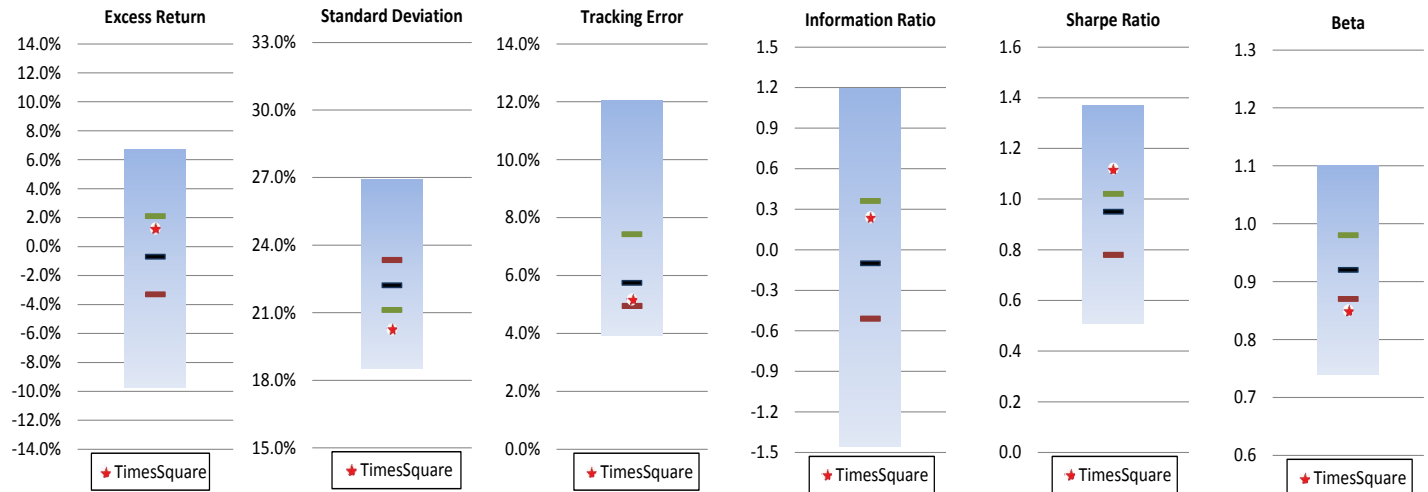
*Note: Based on monthly, net of fee performance data, since inception.*

## TimesSquare vs. Russell 2500 Growth Information Ratios Since Inception (March 31, 2005) – December 31, 2011



*Note: Based on monthly, net of fee performance data, since inception.*

## TimesSquare vs. Russell 2500 Growth Risk and Return Characteristics vs. U.S. Small/Mid Cap Growth Equity Universe For the three-year period ending December 31, 2011



	Excess Return	Standard Deviation	Tracking Error	Information Ratio	Sharpe Ratio	Beta
TimesSquare	1.2%	20.3%	5.2%	0.2	1.1	0.9
Rank	33	10	66	31	16	84
5th Percentile	6.7%	18.5%	12.0%	1.2	1.4	1.1
Upper Quartile	2.1%	21.1%	7.4%	0.4	1.0	1.0
Median	<b>-0.7%</b>	<b>22.2%</b>	<b>5.7%</b>	<b>-0.1</b>	<b>1.0</b>	<b>0.9</b>
Lower Quartile	-3.3%	23.3%	5.0%	-0.5	0.8	0.9
95th Percentile	-9.8%	26.9%	3.9%	-1.5	0.5	0.7
Observations	93	93	93	93	93	93

*Note: Based on monthly, gross of fee performance data, since inception. Universe rankings are against the eVestment Alliance universe of managers as of December 31, 2011.*

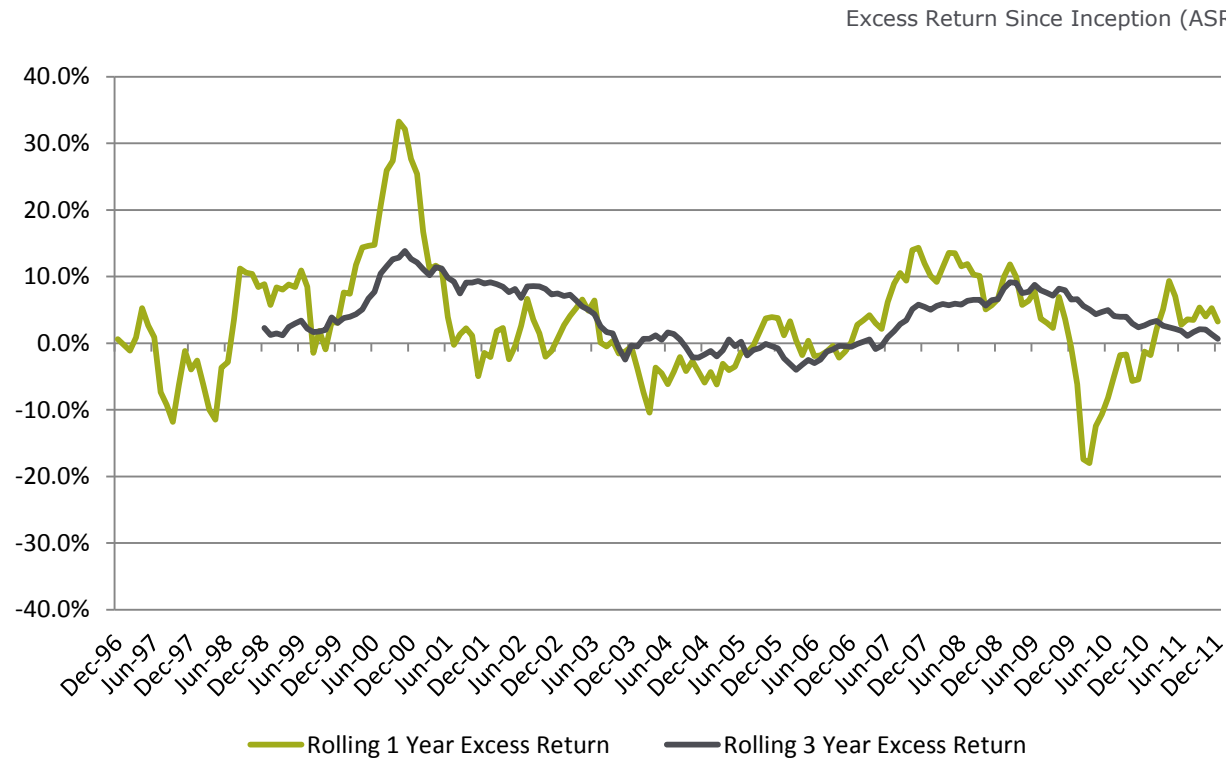
# Champlain

## Qualitative Analysis

Factors	Description
People	<ul style="list-style-type: none"> <li>Investment team is comprised of seasoned investment professionals who worked together at NL Capital in the past.</li> <li>Portfolio manager/analyst position allows for investment staff to have an impact on the portfolio.</li> <li>The firm's ownership structure and investment management process are advantages for staff.</li> </ul>
Philosophy	<ul style="list-style-type: none"> <li>Believe that buying the shares of superior businesses with credible and sincere management teams at a discount to Fair or Intrinsic Value gives investors several potential paths to wealth creation.</li> </ul>
Process	<ul style="list-style-type: none"> <li>Focus on cash flow from operations and assume the perspective of a creditor when attempting to value a company.</li> <li>Identify simple, yet logical investment themes that vary by sector.</li> <li>Sector factors play a significant role in portfolio construction. Specific factors are applied to the 5 major sectors that the team focuses on – Consumer, Financials, HealthCare, Industrials and Technology – in an effort to identify stable, reliable businesses with minimal business model risk. Typically avoid Telecommunications and Utilities sectors due to shortage of “good businesses”. Sector factors eliminate ~60% of the S&amp;P 600 universe before moving on to more detailed fundamental analysis.</li> <li>Before initiating a position, Champlain typically meets with management on multiple occasions and in different settings.</li> <li>Buy superior companies at a discount; sell overvalued stocks.</li> </ul>



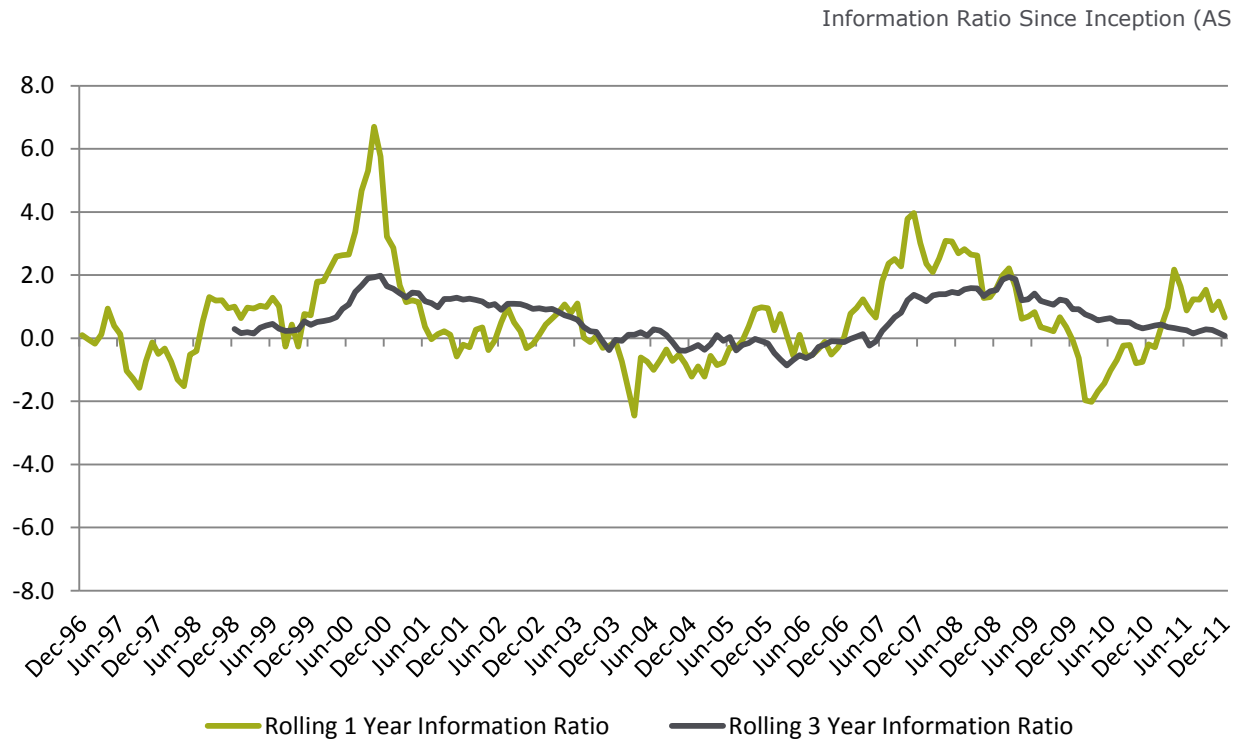
## Champlain vs. S&P 600 Excess Returns Since Inception<sup>1</sup> (December 31, 1995) – December 31, 2011



<sup>1</sup>Net of fee performance of the Champlain Small Cap Core Composite is linked with ASRS portfolio performance. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is December 31, 2007.

Note: Based on monthly, net of fee performance data, since inception.

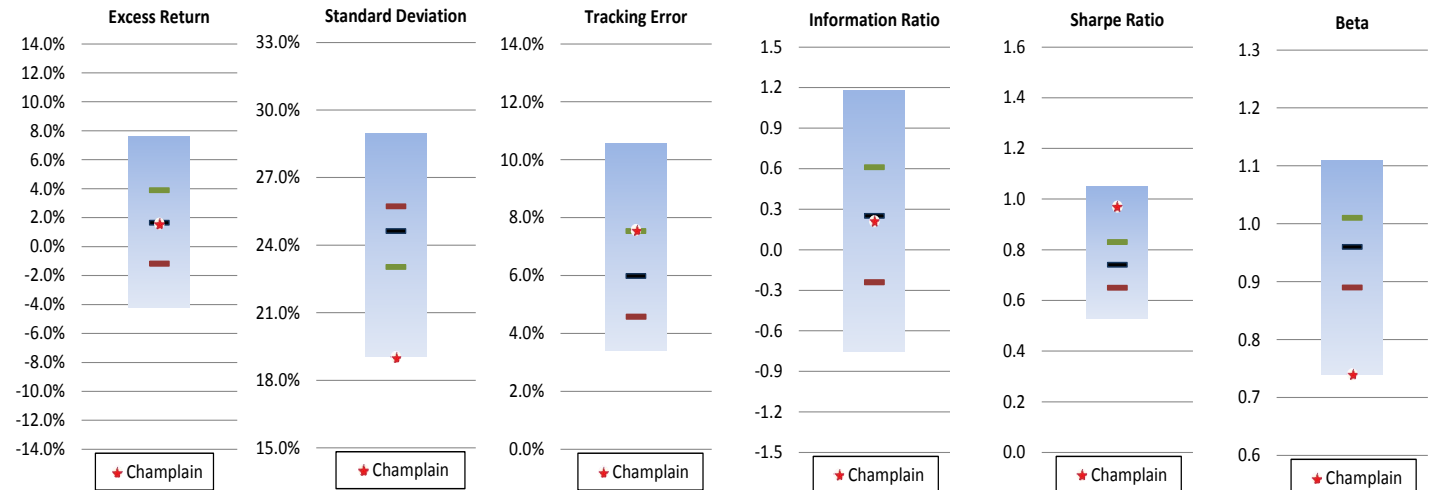
## Champlain vs. S&P 600 Information Ratios Since Inception<sup>1</sup> (December 31, 1995) – December 31, 2011



<sup>1</sup>Net of fee performance of the Champlain Small Cap Core Composite is linked with ASRS portfolio performance. Composite data provided by eVestment Alliance. Inception date of the ASRS portfolio is December 31, 2007.  
Note: Based on monthly, net of fee performance data, since inception.

# Champlain

## Champlain vs. S&P 600 Risk and Return Characteristics vs. U.S. Small Cap Core Equity Universe For the three-year period ending December 31, 2011



	Excess Return	Standard Deviation	Tracking Error	Information Ratio	Sharpe Ratio	Beta
Champlain	1.6%	19.0%	7.6%	0.2	1.0	0.7
Rank	50	2	24	56	11	97
5th Percentile	7.6%	20.4%	10.6%	1.2	1.1	1.1
Upper Quartile	3.9%	23.0%	7.5%	0.6	0.8	1.0
Median	1.6%	24.6%	6.0%	0.3	0.7	1.0
Lower Quartile	-1.2%	25.7%	4.6%	-0.2	0.7	0.9
95th Percentile	-4.2%	28.9%	3.4%	-0.8	0.5	0.8
Observations	152	152	152	152	152	152

*Note: Based on monthly, gross of fee performance data, since inception. Universe rankings are against the eVestment Alliance universe of managers as of December 31, 2011.*

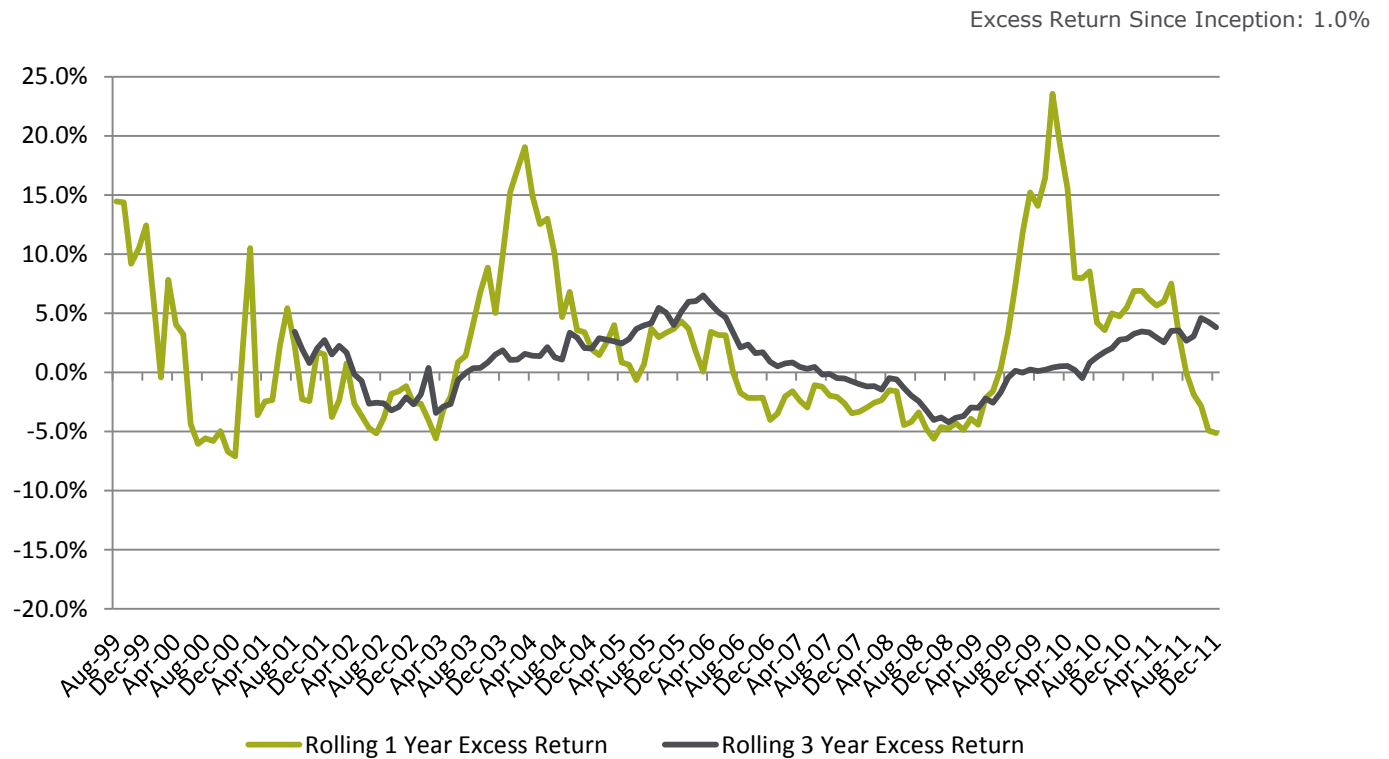
# DFA

## Qualitative Analysis

Factors	Description
People	<ul style="list-style-type: none"><li>• An Investment Policy Committee focuses on the development of long-term strategy enhancements, while a separate team approves strategy implementation and maintains daily oversight of the strategy. This structure creates a linkage between research and portfolio management.</li></ul>
Philosophy	<ul style="list-style-type: none"><li>• Based on the work of Eugene Fama and Kenneth French of the University of Chicago, DFA contends that value stocks have some element of relative risk associated with them, leading to higher expected returns.</li></ul>
Process	<ul style="list-style-type: none"><li>• Seek to invest in companies whose market capitalization is in the smallest 12-15% of the investment universe.</li><li>• Use a value screen to identify securities considered value stocks – look for high book value in relation to a company's market value (BtM)</li><li>• Additional screens are used to weed out stocks with asset class or pricing concerns.</li><li>• Trading opportunities for all stocks are monitored and must be favorable before purchase.</li><li>• A security becomes a sell candidate once it no longer fits DFA's book to market requirements, size criteria and passes the momentum screens; this patient trading technique has generally resulting in very low trading costs.</li></ul>

## DFA vs. DFA Blended Benchmark<sup>1</sup>

Excess Returns Since Inception (August 31, 1998) – December 31, 2011

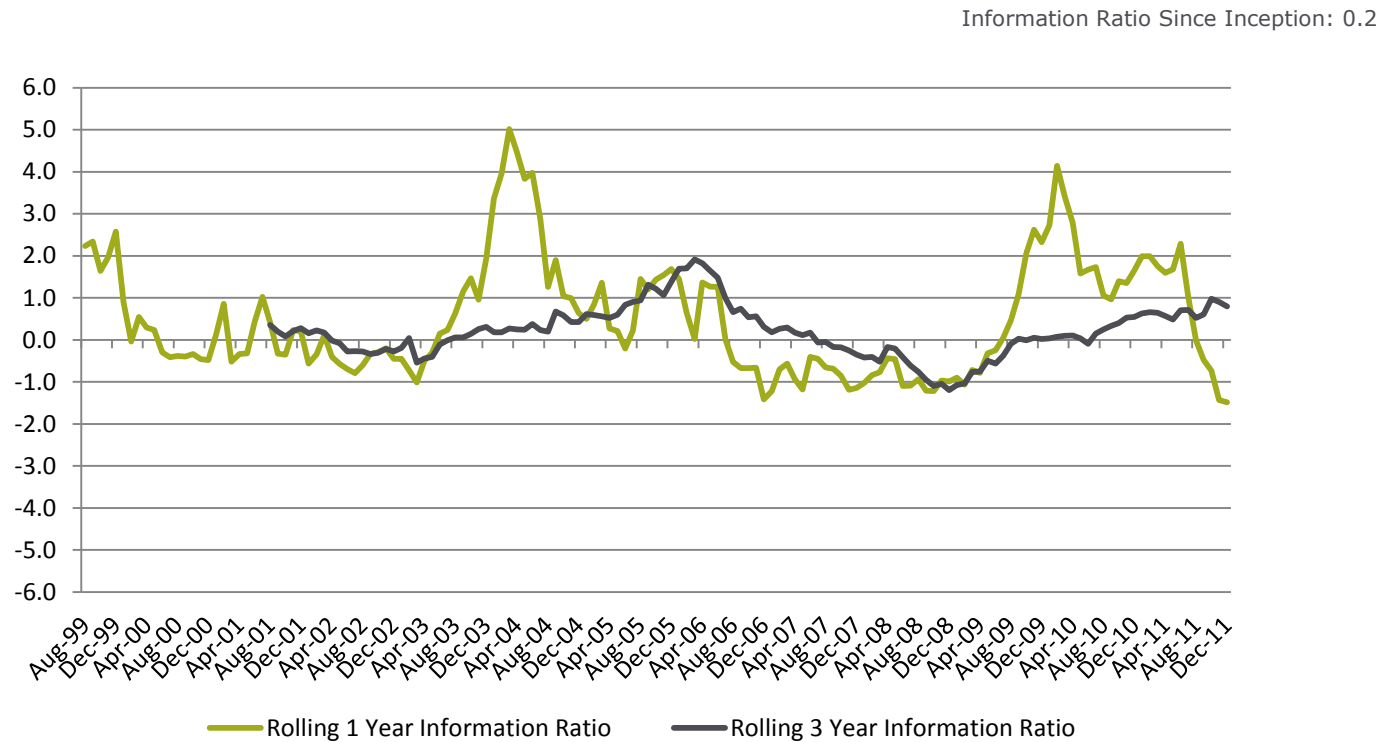


<sup>1</sup>DFA Blended Benchmark is a blend of the Russell 2000 Value Index prior to January 2007, and the S&P/Citigroup 600 Value Index from January 2007 going forward.

Note: Based on monthly, net of fee performance data, since inception.

## DFA vs. DFA Blended Benchmark<sup>1</sup>

Information Ratios Since Inception (August 31, 1998) – December 31, 2011



<sup>1</sup>DFA Blended Benchmark is a blend of the Russell 2000 Value Index prior to January 2007, and the S&P/Citigroup 600 Value Index from January 2007 going forward.

Note: Based on monthly, net of fee performance data, since inception.

# DFA vs. DFA Blended Benchmark<sup>1</sup>

## Risk and Return Characteristics vs. U.S. Small Cap Value Equity Universe

For the three-year period ending December 31, 2011



	Excess Return	Standard Deviation	Tracking Error	Information Ratio	Sharpe Ratio	Beta
DFA	4.0%	28.8%	4.8%	0.8	0.6	1.1
Rank	45	87	83	27	72	10
5th Percentile	12.2%	20.6%	12.3%	1.3	1.0	1.2
Upper Quartile	5.8%	23.3%	8.7%	0.9	0.8	1.0
Median	3.4%	24.9%	7.1%	0.5	0.7	0.9
Lower Quartile	1.2%	27.0%	5.2%	0.2	0.6	0.9
95th Percentile	-3.1%	31.8%	3.7%	-0.5	0.5	0.7
Observations	211	211	211	211	211	211

<sup>1</sup>DFA Blended Benchmark is a blend of the Russell 2000 Value Index prior to January 2007, and the S&P/Citigroup 600 Value Index from January 2007 going forward.

Note: Based on monthly, gross of fee performance data, since inception. Universe rankings are against the eVestment Alliance universe of managers as of December 31, 2011.

# Information Disclosure

- **These materials contain summary information regarding the investment management approaches described herein and are not a complete description of the investment objectives, policies, guidelines or portfolio management and research that supports these approaches. This analysis does not constitute a recommendation to implement any of the aforementioned approaches. The information has been obtained from sources NEPC believes to be reliable, but we cannot guarantee its accuracy or completeness.**
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